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THE RÔLE OF THE STATE IN THE
PROVISION OF RAILWAYS

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PREFATORY NOTE

THE following study was originally undertaken at the London School of Economics in connection with the writer's candidature for the Degree of Master of Science (Economics) of the University of London. It owes its appearance now in book form entirely to the inspiration and encouragement of Mr. W. Tetley Stephenson, under whose supervision the writer carried on his researches for a period of over three years.

The progress of this work has been followed throughout by Mr. Stephenson. He has never restricted the writer from holding and developing an independent point of view, nay, he has uniformly encouraged it. During his discussions with the writer he would constantly range himself in the opposite camp, if only better to enable him to ward off a possible criticism. For his invaluable guidance and stimulating direction most unstintedly given the writer can but inadequately express his sense of gratitude. He is also indebted to Herr Geheimrat, Professor Dr. Schumacher, and Excellenz Von Der Leyen, of the Berlin University, for their valuable suggestions and references to the literature available on the subject of development of railways in Prussia, and for securing him access to the rich collection of railway books in the Imperial Transport Ministry's Library (Reichsverkehrsministerium Bibliothek). The writer is also under obligation to Sir William Acworth for his general criticisms and in particular for his suggestion of the title of the book in place of the original one which was likely to have given an impression of a wider field being covered in this volume than actually is.

H. M. JAGTIANI.



INTRODUCTION

To write a book in a language which is not one's own is in any case a considerable achievement. But for an Indian author to acquire such familiarity with the languages of two other great European countries as has enabled him to master the technical literature and to understand the institutions of those countries is an even greater achievement.

I first became acquainted with Mr. Jagtiani's work when, as examiner for the University of London, I had the pleasure of reporting that it was a Thesis more than up to the high standard required for the degree of M.Sc. (Econ.). In its revised form I am now glad to commend it to a wider circle of readers. It is to be hoped that further editions will be called for, and that the author will then take the opportunity of reviewing and extending his treatise. For did not a book as famous in its permanent form as Bryce's *Holy Roman Empire* take its origin as an Arnold Prize Essay?

Mr. Jagtiani discusses the rôle which the State should play in railway development in the light of the experience of three countries, England, Prussia, and India. One may summarise by saying that in England the State did nothing to help development; in Prussia the State and private enterprise worked side by side, and usually hand in hand, and in India the State bore the whole burden. For England the story has been told before, but the author has found a good deal that is new to say. For Prussia he has broken ground which as far as I am aware is new to English readers. For India it is safe to say that to English readers the history will come as new. Like other people who have seriously studied the subject, Mr. Jagtiani comes to the conclusion

that the question, whether and how far the State should undertake railway development, admits of no general answer. The answer in each particular case depends on heredity, and on political, social, economic and financial conditions. Private enterprise was no doubt the right policy for England. The attempt to enlist private enterprise in India has consistently failed. And our author shows how facts and the policy of the wisest Indian administrators have constantly clashed with English opinion, which, as voiced both by the City and the India Office, thought that English methods might fitly be applied in India.

Mr. Jagtiani's book raises, though it does not directly deal with, another important question. It may or may not be necessary for a certain Government to undertake railway development. But it is necessary that every Government should concern itself with railway control. And the history, alike of England, Prussia and India, shows that Governments have been in railway matters ill-informed and their policies unwise and vacillating. France alone has had a policy which, whether wise or unwise, has been, with few exceptions, logical and consistent throughout. What else was to be expected? Railroading is a technical subject and the technicians were kept in a subordinate place. The policy was dictated by laymen, whether by Civil Servants or Parliamentary Committees, as in England—the Board of Trade never had on its staff a single man expert in railway matters, other than pure engineering and operation—or in India by Secretaries of State, Viceroys and Members of Council.

Of late years Governments are coming to realise that the proper person either to control or to manage a railway system is a railway man. In countries where the State manages, the railway budget has been separated from the ordinary budget, and the railways have been released from the numbing grip of the Minister of Finance. Countries as far apart as Japan, Canada and South Africa have acted on these lines. Austria, Germany and India are the latest converts. In countries where the State only controls—England and the United States—special railway tribunals

have been established, and the scope of their functions constantly grows, excluding in ever increasing measure the control both of the Legislature and the ordinary executive.

Mr. Jagtiani's book brings ample evidence that the change has come none too soon. I heartily commend it to all who are interested in its subject and to the many more who are not, but who—considering the importance to every State of a wise railway policy—ought to be more interested than they are.

W. M. ACWORTH.

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THE RÔLE OF THE STATE IN THE PROVISION OF RAILWAYS

INTRODUCTORY CHAPTER

It is the purpose of the chapters that follow to investigate what system is best adapted to lead to a healthy development of railways in a country and to see to what extent the association of the State is necessary. For this purpose three countries are examined: England, Prussia, and India. No lesson in the history of these countries is clearer than that railways, as an instrument of public economy (*Gemeinwirtschaft*), as essentially monopolistic in character, and as involving huge outlays of capital, are far removed from an ordinary private enterprise (*Privatwirtschaft*). There are three requisites to a healthy development of railway facilities: (1) a wise and economic distribution of the net; (2) a well-regulated growth as opposed to a spasmodic and hysteric one; and (3) protection against shocks of speculation. The first is the most essential. Judged by these principles, an inadequately controlled and regulated enterprise in the railway field has failed. History bears ample testimony to this fact. It is argued by some that these requisites can be fulfilled only if the State undertakes the work. These will be discussed at some length here, and it will appear that (even when private enterprise is retained) the object can also be achieved by exercise of State control.

It will be admitted that there is no direct relation between the returns and the amount of capital invested in the enterprise. To a considerable extent the returns of a railway company are dependent upon the nature of the area which

it serves. If then the development of railways is left entirely to private enterprise, it is unreasonable, if not absurd, that a concessionaire should have all the profits of a naturally well-situated line. On the other hand, it is impossible to expect that anyone will assume the responsibility for the deficits of an unproductive one. In a country where railways are looked upon as a proper field for private enterprise alone, what limits the dividends of companies is that high dividends attract new enterprise which shares the traffic. The public authorities can hardly in such a case refuse the demands of a competing line when such a refusal will mean that the existing company is enjoying revenues beyond all proportion to their costs. On the other hand, the multiplication of such lines has the effect of lowering the dividends on the capital invested, without really diminishing the charges to be paid by the public, by increasing the capital charges, because an agreement between the companies is bound to result in an effective monopoly. The wisest course, under the circumstances, is that a Government should, in return for a monopoly, insist that the surplus of profits, or a large percentage of it, above a certain reasonable return, should be utilised for the purposes of the public benefit. M. Colson¹ discusses three modes of employing this surplus: (1) the reduction of rates; (2) the improvement of service; and (3) the construction of branch lines. He dismisses all the three alternatives suggested in the following questions and answers: "What is the object achieved in lowering the tariffs where they are already sufficiently low, while the financial results of the other lines do not admit of such reductions? Why multiply the service of trains already adequate—construct branch lines in a region where all the places of any importance are sufficiently well served . . . ?" It is much more rational to pay in the excess profits to the authorities granting the concession which can make use of them as they will. They can give relief not necessarily in the area which is served by the line yielding profits, "but in places where

¹ *Travaux publics*, Livre VI du Cours d'économie politique, p. 427, by Colson.

the tariffs are really too high, the services of trains inadequate, railway connections too meagre." Or, still further, the profits may be utilised in improving some other public service, the organisation of which is more urgently needed in the public interests than improvements in railway facilities; or finally to lighten the burden of taxpayers if its excessiveness is the most crying evil in the country. "That is much better than to accentuate the inequalities which are bound to result from an arbitrary division of railways in distinct systems, as the reliefs will be obtained only by the clientèle of those which contain the best lines, thanks to their surpluses." M. Colson definitely asserts that even the creation of a common fund formed out of the surpluses, for the purposes of improvements in the transport facilities, is not so satisfactory as their payments towards the public treasury. So stated, there is no fault to find with it in theory. But looking at the railway industry of a country as a whole, it is doubtful if it is advisable to divert its surplus proceeds for general purposes. All such surpluses, after paying the capital charges, are in the nature of a tax, and a tax on transport can only be justified in extreme cases. But that is a general question outside the province of the subject of this present thesis. One is, however, satisfied that in order to derive the greatest economic advantages from the railway industry some plan must be devised by which there is a proportional development of all the parts of the country. It is clear that this could not be done without some sort of control by the State. As we shall see, in England such warnings from people of foresight like Morrison and Stephenson went unheeded. But the comparative richness of the country has mitigated the effects of the loss entailed by a complete disregard of this idea. In any other country not as rich as England, the effects would have been very severe.

Prussia, as will be seen in the following pages, remedied the evils by State purchase of the railway net. France, by a series of contracts entered into in 1859, 1883 and in 1921 respectively, has been able to maintain a kind of financial association with the companies which has enabled

her to relieve herself of the burdens of lines, which, as independent concerns, could not have been built without seriously endangering the State finances. In India also the close financial relations between the State and the companies has been a source of great strength to the finances of that country, and enabled the Government to utilise the share of the surplus either in the extension of the railway net in poorer areas or the lightening of the burden of taxation of the population. Whether it is worth while to employ the agencies of the companies and pay them a share of the surpluses, necessary to induce them to greater economy of management, is a question of management to which any attempt at an answer would lead one far afield.

This much is clear, that in drawing up any comprehensive scheme of railways for a country, some means must be found by which the poorer lines are tacked on to richer ones. This could not however be done without some sort of interference from the Government. It is maintained by some that this can be done only when the Government is the owner of the main productive lines. But it may be pointed out that the evils of unequal development of a country, and the neglect of poor parts under a private system of railways, is not an inherent defect of the system as such, but is mainly due to a defective system of granting concessions and neglect to group together main arteries of a railway with the branch lines in one unit. The State can stipulate for a share of surplus profits on the rich main lines or directly tax them and use the proceeds in aiding the poor branch lines.

Another defect of a private system of railways which will be discussed in the following pages is that private enterprise is more dependent upon the varying conditions of the money market than State enterprise, and that the construction of railways under it has proceeded in a rather disorderly and spasmodic fashion. The railway manias which have occurred in every country almost without exception are evidence of this fact. Feverish activity is soon followed by a slump in the industry. The sudden shiftings of capital to the railway industry are generally

attended with disastrous consequences to the general economic mechanism. The sudden fluctuations in the demand for railway material and labour affect large circles of population. As against this, it is argued that the State can proceed in a more even manner.

This evil can also be prevented under a private system by means of a well-thought-out and well-regulated plan of granting concessions, intelligently administered so as to avoid disturbing effects in the financial and industrial markets. Against this may be urged relatively greater susceptibilities of private companies to the fluctuating conditions of the market; but there is nothing to prevent the State from aiding them to tide over financial difficulties. This has been done more than once in France and also during the earlier period in Prussian railway history.

Dr. Emile Sax traces these defects of private system of railway construction to want of experience in the earlier period, and is of opinion that they were only possible because of inadequate regulation of private railways. According to him, in any appreciation of private system of railway development such phenomena as were noticeable in the United States, where the railways were submitted to no control and where competition was given an unbridled freedom, have no real place.¹

On the other hand, any preference for a State system of development should presuppose a good administration with an evenly represented legislature, and a well-arranged financial control. Instances are not wanting, where the development of State railways has been influenced not by an economic point of view, but by political considerations. Railways have been built to fulfil electoral promises, or too great an emphasis has been placed on almost mechanically equal treatment of all parts of the country regardless of their varying needs. The condition of State finances also plays its part in the decisions of a Government, sometimes very unwelcome and undesirable. There is thus a danger that a Government may at times be too niggardly in its schemes of extension and at times too extravagant.

¹ *Die Verkehrsmittel in Volks und Staatswirtschaft*, pp. 159-60. Sax.

Australia has often been quoted as a byword for "electoral" railways. Referring to instances of railways built only to satisfy the demands of electors, Emile Sax cites Bavaria,¹ where several of the local railways have, obviously, to thank parliamentary influence for their existence. According to him even Prussia cannot be held to have been free from these influences.

"It will be a case of superhuman perfection if the repeated programmes of extensions laid before the Landtag are not affected to some extent by party considerations of the interests of the landed nobility."

According to the illustrious writer, a wise administration, however, can avoid these mistakes.

The third defect of a private system, which has also been stressed, lies in the methods of financing adopted by companies. Railways, under a private system, have led to abuses of gambling in the share market. But the excesses wherever noticeable, however condemnable they may be, may be avoided to a great extent by a well-conceived system of granting concessions, by which it may be required to prove the public need of a line petitioned for, and to show how it is intended to finance it. In the experimental stages of the railway industry such examination may have been difficult, and a freer hand to the financiers may have been found desirable, as was recommended by certain members of a Prussian Commission appointed in 1873. But at this stage there is no such necessity.

It is also argued that private companies can only raise capital at rates higher than those at which a State can. This is probably true under normal conditions. But this argument, as well, is to be considered as a question of fact rather than as a definite principle. Given a State with its finances completely deranged, its credit may be lower than

¹ Papers often make great fun of the construction schemes of railways. Thus one paper gave a picture of a Bavarian standing before a magnificently built railway station. He asks a porter why the line constructed so long ago had not yet been opened. The porter answers, that every one knows the reason. The State saved the more, the longer it was not opened for traffic!

² Op. cit., pp. 159-60.

that of the railway undertaking. A private company may in such a case be able to raise the necessary funds on better terms than the State. The conditions of the State finances in Germany and Austria-Hungary are instances in point. It is interesting to note, in this connection, that the Railway Finance Bill which is now pending before the German Parliament proposes to establish a railway regime with a separate budget and with power to raise loans on the undertaking itself. In contrast to this, in Belgium, although there is a strong movement for separation of the railway budget, it is not proposed to raise loans on the security of the undertaking only, because the Belgian State finances are in a stronger position, and offer greater security than the railway undertaking alone. In the eighties of the last century it was the same derangement of State finances which compelled the French Government to call in the aid of companies to carry on the programme of new constructions, in spite of the fact that the feeling for State purchase of railways ran very high.

Incidentally, in this connection, may be considered the important argument that as railways involve such huge outlays of capital, it is necessary to see that they are not withdrawn from other more urgent and necessary needs of a country. This necessity of conserving the national resources was one of the main arguments with the advocates of nationalisation in Prussia.

"Under a private system of railways the general economic interests (Gemeinwirtschaft) are vitally concerned to see that the capital is raised in a proper manner without introducing a disturbing element in the market, and it is incumbent upon the State to exercise a suitable control for this purpose."¹

This control implies a serious departure from the accepted principles of *laissez-faire*, which of all things holds dearest to the view that there are no better judges of the wisdom of the investments of capital than the owners thereof.

The arguments which have been so far considered fail to establish the necessity of the State to undertake directly the task of construction. The object of a steady, com-

¹ Op. cit., p. 120.

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prehensive scheme of railways could be achieved equally by a system of private companies regulated and controlled by the State. But in any case the State must organise to be able to exercise this control effectively and reasonably.

In order that the control be effective the executive arm must be strengthened. Control by means of parliamentary bodies is bound to be defective. The want of a competent executive organ is responsible for many grave evils in the railway development of England. The need of it was long ago recognised in France and Prussia. Its existence has been a great factor in the success of State regulation or operation of the railways. Even the Prussian Landtag of the seventies of the eighteenth century was not considered a fit body to be entrusted with the duties of granting concessions, as being too open to popular influences. A commission, which was appointed in 1873 to examine the methods of granting railway concessions, set aside the parliamentary procedure as inadvisable for the purpose and recommended the establishment of an executive organ for the purpose.¹ In this respect we are in full concurrence with the conclusions of Cleveland Stevens :

• “ The central problem, whether the railways remain in private hands or be taken over by the State, is the creation of a permanent Board of Control, as far removed as is possible from the interference of parliament.”²

One is tempted to believe that unless the State has some financial participation in the undertakings the control will not always be reasonable. M. Colson urges the necessity of this financial association, on the ground that without it the companies have no more guarantee than the mere equity and wisdom of public powers and

“ it is a guarantee which in the face of the insistent demands of the public is at most fragile. It is useful, nay, indispensable, that the public authorities should be so associated with the companies that not only do the former not lend themselves to imposing ruinous measures, but also readily give their sanction

¹ Drucksachen No. 11. Haus der Abgeordneten, p. 158.

² *English Railways, their Development and their Relation to the State*, p. 324.

to all measures which may increase the revenue of the companies without materially affecting the public."

The general financial participation of the State will also make it easy for it to use its share of surplus profits in aiding enterprises in poorer parts of the country. Mere grant of a monopoly right to a company in a certain area will not facilitate the imposition of a stipulation that the profits above a certain limit be shared with the State. In Argentina something similar has been done by imposing upon the main-line companies the duty to build side lines in their areas. But whatever success this method may meet with in new countries with large undeveloped new tracts, where the preference of one part over the other for development is a matter comparatively unimportant, this method is not the most economical for old and settled countries. A rich main line may be able to multiply its side lines, without any such urgent need for them in that area, as in another.

One is not unfamiliar with instances of financial association of the State and the companies, but there is no country where this participation has been decided upon only on these grounds. The necessity of aiding and helping the companies which would not or could not enter the field alone, has been the sole ground which has influenced the decision of the State. The participation of the State has taken the form either of what is known as *subventions à fonds perdu* or a guarantee. The former may take the shape of money or land grants,¹ or the construction of substructure of a railway, as happened in France. The motive reason for this form of help is that the rest of the capital supplied by a company would represent that portion of capital on which it is hoped that the traffic will furnish such a return as will attract the investor. But it is pointed out by M. Colson that at that stage the elements of expenditure and receipts are far from lending themselves to any calculation which can enable one to fix the amount of subvention in such a manner that the result aimed at may be achieved.

¹ The grants of land in America were of this nature.

"It may happen that the subvention is insufficient to protect the undertaking from falling into difficulties, or, again, that the undertaking prospers in such a manner that the subvention rises in value and proves to be a needless grant, which only goes to fill the pockets of the shareholders. . . . But the authorities granting the subvention have the certainty that their sacrifices, even if indispensable, do not carry them beyond known limits."¹

One serious objection to this is that if an undertaking finds itself in difficulties, the State will have to intervene and help to bring it to its feet again, in order to restore the confidence of the investing public in the railway industry. In no country, as a rule, could a Government afford to fold its hands over the failure of an undertaking to complete a line conceived to be necessary for public benefit. Exceptions to this are found in the new countries, especially the U.S.A., where the bankruptcies of several companies were viewed with comparatively unperturbed mind, as they affected relatively few immediate interests.² In old and settled countries the interests of large sections of the population will make it almost incumbent upon the State to step into the breach. It is then no consolation to the Government to know that the limit is set. As against this, the State cannot claim a share of the increments if the value of subventions has appreciated beyond all expectations.

Guarantee of dividends on the invested capital is a more

¹ *Op. cit.*, p. 428.

² In the U.S.A. the lost confidence of the investing public, following the collapses, had generally a short-lived existence. A variety of factors, sometimes the alluring prospects of discoveries of gold mines, sometimes the almost imaginary hopes of golden harvests, have kept alive the speculative interests of both the European and the American public. The appreciations of land, of which there were almost over-generous grants, have been another factor in helping the railways to emerge from the shocks of financial difficulties. Speculation is useful so long as it is successful. Its failure is attended with disastrous consequences in its check to the confidence of the investing public.

In an old country the factors for the maintenance of a speculative interest are few.

But even in the U.S.A. the importance of relying upon secure investments is being increasingly realised. The public, if they are to be invited to supply private resources, will ordinarily always demand a safe and satisfactory return. To quote Ripley: "And if private resources fail, as fall they must without due encouragement and security, the State must shortly intervene and raise the funds itself, or else guarantee a certain return." In a growing country the necessity is all the greater.

reasonable form of aid, as it depends upon the actual turn the traffic takes. This may be distinguished into two kinds: (1) a guarantee in the nature of a varying yearly sum granted *à fonds perdu*; (2) a guarantee which is in the nature of an advance to be repaid when the finances of the undertaking are in a prosperous state. The ground of this distinction is that in the one case it is a permanent aid to an undertaking which apparently has no chance of being self-remunerative; in the second case, that the undertaking does not promise to be remunerative during the initial period of development, and thus keeps away private enterprise, unless guaranteed.¹

There are obvious difficulties in the successful execution of a guaranteed system. In the first place, the inconvenience of making the companies accept the burden of poorer lines is not entirely removed. A guaranteed main line, if it has promise of good returns, will not undertake the responsibility for them, as they will endanger its prospects. If, on the other hand, the branch lines are built on a separate guarantee, there is no party which benefits from their construction except the main line to which they will bring new sources of traffic. The second objection to which this system is exposed is that such companies lack incentive to cheap construction. In Russia, as well as in Austria, instances of wasteful expenditure on construction under such conditions are not unfamiliar.

Both these evils are, however, not inherent in the guarantee system. They are made possible only: (1) when sufficient precautions are not taken to ensure the acceptance of the branch lines by the main line so as to make one unit; (2) when sufficiently stringent control is not exercised by the Government over the methods of raising finances and over their expenditure. It was the sleepy governmental supervision and control which ran the State undertakings of Austria and Russia into becoming objects of chicanery.²

A more practical solution of these difficulties appears to be one by which, instead of merely relying upon the acceptance by companies of comprehensive units of railways,

¹ P. 136, op. cit.

² Pp. 136-41. Emile Sax, op. cit.

some means is found to supplement this by a participation in the profits over and above a certain rate, which could be made available elsewhere. It is difficult to arrive at any conclusive programme of extensions, several years ahead. It will be, then, always a matter of new negotiations with a company to induce it to take over a line not already provided for in the programme. Under the circumstances, a separate guarantee may be necessary, which, if the State shares in the surplus profits, could be met from such share.

A word may be added upon the manner in which the surplus profits should be calculated. These should be arrived at after including in the expenses side all the interest charges on the capitals invested by both parties. Otherwise, if a company constructs at the expense of the Government, there is an inducement to run into too costly equipment in order to keep down as far as possible the running cost, any decrease in which will be reflected in an augmented share of surplus profits.¹

There is nothing in the guarantee system which could condemn it from the start; on the contrary it offers a wholesome means of participation by the State in the financial fortunes of companies, by which it is able to influence a reasonable distribution of the railway net, to lend its superior credit to the companies, and to ensure a well-ordered march of progress in the development of the railways. Wisely planned, it can be inferior only to a well-organised State system. The requisites of the latter are many. On the question of a preference for either the one or the other, the circumstances of each country will have to be considered. The Prussians seem to imagine that they

¹ The financial participation by the guaranteed companies in the profits above the guaranteed minimum is necessary to give some inducement to economy in management. For the full fruition of this object M. Colson suggests that the participation should be so based that even a company which has not lifted itself above the guaranteed minimum, and has no hope of doing so, should have some incentive to economy in management. For this purpose, he proposes that in the case of a company of this sort, a fraction, however small, of the difference between receipts and working expenditure (excluding the capital charges) should be offered to it. Only the balance of this difference should be deducted from the capital charges, in order to obtain the amount of subvention necessary. Colson, Charles: *Cours d'économie politique* (Vol. VI, 1910); *Les travaux publics et les transports*.

worked out the best solution possible for themselves when the State became the owner of the railways. The French, on the other hand, are satisfied that no other method would have been so serviceable for them as the one they adopted.

The plan of the following chapters is very simple. It is attempted to cull the lessons of history as one proceeds to examine the histories of the countries which have been taken up for the purpose. The methods of England may at once be discarded as uneconomic. There is something to choose between a well-considered guarantee system and a well-regulated State system.

BOOKS OF GENERAL REFERENCE

1. Dr. Emile Sax: *Verkehrsmittel*. Vols. 1 and 3, 1922.
2. M. Colson: *Les travaux publics et les transports*. Tome VI, 1910.
3. Royal Economic Society Congress: papers read on the "State in Relation to Railways." 1912.



CHAPTER I

ENGLAND

In attempting to find out the most suitable policy by which the railways may be developed, experience of England will always furnish a valuable guide. England may be very aptly described as the classic instance of the achievements of private enterprise in railways. 'The State has offered no aid beyond what is implied in the mere granting of a concession and a right to expropriate the owners of the land through which a line may run. Its attempts at guidance have been limited, and these also frustrated by a peculiar conception of the executive functions of a Government. Throughout history it is easy to trace out how the want of a competent authority supported by the confidence of the legislature has led to a neglect of a broad and comprehensive view of the railway development of the country. The railway net, as a consequence, has grown up in a haphazard manner. In this chapter all historical details have been eschewed and the broad defects of the policy and its effects are outlined.

SECTION I

THE DEFECTS OF THE METHODS OF DEVELOPMENT

Railways in England were considered more from the view-point of local interest than as a part of a general scheme of railways for the country. The system adopted was to submit the proposal of a line to a private bill Committee of Parliament. From the Constitution of the Committee

local interests were chiefly regarded in their deliberations.¹ It was impossible that from the separate and unconnected proceedings of bodies whose existence commenced and terminated with the occasion of each Railway Bill, there could issue any uniform system of sound general rules. Generally the attention received by each bill varied with the amount of opposition of interested parties. Unopposed bills had an easy passage through the Committee and were subjected to practically no check. This method of control in the parliamentary Committees, vexatious though it was, was certainly better than no control at all. This point will become much clearer when account is taken of the American experience of uncontrolled construction. The defect of the practice of English railway construction is put forward with great clearness in the following passage of the Committee of 1844:²

"In the future proceedings of Parliament, railway schemes ought not to be regarded as merely projects of local improvement, but that each new line should be viewed as a member of a great system of communication binding together the various districts of the country with a closeness and intimacy of relation in many respects heretofore unknown."

They further explain that the important questions of principle have been treated slightly and superficially;

"that the demands of companies have not been and could not have been scrutinised unless there were opposing parties in the field; and that there have been many such demands not resisted by any particular interests which nevertheless it would have been important to sift and investigate in the interests of the public."

The Committee then examine various cases, hypothetical and real, in which public interests may be involved, and yet may not receive that attention which is due to them. When, however, they approach the subject of the remedy to be suggested they show themselves hesitant and faltering. The explanation is easy. Never before had the Govern-

¹ Third report, Select Committee, 1844.

² Gladstone's Committee, Vol. XIV, p. 6, the same as above.

ment^e been faced with a problem so difficult as the railways. At a time when the theory of *laissez-faire* was predominantly gaining ground they were confronted with the necessity of State control. Witness after witness had pointed out that competition was an inadequate and a crude method of developing railways in England, and that it was more "efficient as an instrument of injury to those which already subsist, than as a means of guaranteeing to the public increased cheapness of travelling." Divided between their faith in the principles of the Manchester School, and the necessity of control which was agreed to even by witnesses of railway companies, the Committee showed a natural hesitation in arriving at their conclusions. The third part of the fifth report of the same Committee is entirely taken up with viewing the defective system of the railways of the country and the measures proposed to remedy it. To this day the report retains a lively interest for the railway legislator in the department of promotion of railway lines. In a series of questions they propound the difficulties attaching to the question. These will be set down later together with the answers given. The report then proceeds to consider the distinguishing characteristics of railway companies which compel a departure from the principle of non-interference. It is pointed out that the expenditure of capital is not by mere individuals, or even by companies associated under unlimited liability, but by incorporations that are permanent and unrestrained by checks of ordinary liability. Reference is also made to the irredeemable character of the investment. By virtue of these features it is argued that

"Parliament will be on its guard against the superficial reasonings by which it is attempted to apply popular maxims sound in their ordinary operation to cases more or less removed by their peculiarities from the reach of such maxims, and will keep steadily in view, as a paramount consideration, the attainment, whether by ordinary maxims or by such modifications of them as circumstances may justify and require, of the greatest amount of ultimate public advantage."

Reverting to the questions and answers above referred

to, it would be convenient to arrange them in parallel columns :

Question.

Are they to proceed upon the assumption that every new railway is a new public advantage ?

That the willingness of parties to expend their capital in making it is a sufficient guarantee for the commercial character of the undertaking ?

That their seeking an Act of Parliament incurring the necessary expenses and complying with the other established conditions affords adequate proof of such willingness and of the power to give it effect ?

Answer.

Every new railway would be a new benefit to the country if Parliament could ensure its being worked, and also could provide against its becoming the cause, in those cases where it might compete with a previously existing line, of an increase of aggregate charge upon the traffic of the country greater than any increase of accommodation which it might afford.

Again, willingness of parties to expend their capital in making a new railway is not to be at once taken as a sufficient ground for granting the necessary powers, since proprietary rights are not to be set aside except for adequate and public advantage ; since there is no public advantage in the construction of a work which cannot afford remuneration ; since there can be no security for the working of a railway except its yielding profit ; since there may sometimes be indirect purposes in the proposal to construct new lines, tending not to increase, but to the ultimate limitation of railway enterprise, and of public accommodation as connected with it.

Again, the Committee conceive that Parliament would commit a gross error if it should take for granted that . . . they are, therefore, also both sincere in the intention and supplied with the means of carrying that scheme into effect. The question even with such companies as have ample ability, after they have obtained their Acts, as well as at earlier stages, will be whether it is more profitable to proceed upon the powers of the Act, or to suffer them to rest in abeyance, and if there be cases in which it is more for the interest of projectors of a new line to coalesce with an old one, and to abandon their own project altogether, than to carry forward the latter, it is most important that Parliament should be aware of the facts beforehand, and should deal with them accordingly. New railway companies may, as is quite conceivable, be formed . . . with the specious promise . . . and, under these pretexts powers might be obtained . . . and it might notwithstanding prove . . . that on the one hand there were no adequate means . . . but that powers had been improperly used as efficient instruments of extortion against the subsisting companies to whom might be offered only the alternative of losing their traffic or of buying off opposition.

Question.

And the check of competition will, as railways multiply, secure to the public the benefit of best accommodation both on the new and old lines at the lowest cost?

Answer.

And lastly, with regard to the check of competition by railways amongst themselves, the Committee cannot in all cases repose implicit faith in it . . . the Committee think that little can be permanently expected from the mere multiplication of railways in the way of security for moderation of charge. There may, indeed, be indirect and accidental competition between railways, which causes cheapness, and there may even be direct and brisk competition, with great reductions of fare, for short periods. But in such cases of competition, somewhat modified, as have hitherto occurred, the result has generally been increase of charge, by mutual arrangement or positive amalgamation of competing companies. . . . The Committee feel this difficulty, that they cannot in the case of railways anticipate any such facilities in the introduction of new competitors as to check the proceedings actually in possession of the traffic, that in fact there is no district of which the traffic will support any considerable number of railways. . . . It is, therefore, their apprehension that in such cases either the different railways will continue to be worked, and then that extreme measures will be taken in concert, for the purpose of paying very moderate dividends; and it may be found that several capitals have been expended for performing the business, which could have been equally well, or perhaps even better, performed by one; or a closer combination will take place among the companies; they will choose the line upon which they can most profitably carry the traffic, and will leave the rival line or lines unoccupied.

Or at least that an uniform encouragement to their construction will go much further towards the attainment of that end than any attempt on the part of the State to make terms of advantage in particular cases?

The Committee will now endeavour to sum up the results at which, from the examination of this part of the subject referred to them, they have arrived.

(1) In cases where it is proposed to push new lines of railways into districts not at present within the circle of railway communication, the main questions will ordinarily be simple and require no detailed notice from the Committee.

(2) In cases where branch lines are proposed with a view merely to the more convenient connection of a particular town or district with a subsisting railway, and not with a view to the formation of a new line of ulterior communication, the same observations will apply.

(3) In cases where it is intended to form, either at once or piecemeal, new lines of communication, which are to compete with subsisting lines, there should be an examination of each scheme with respect to the amount of increased facilities which it is intrinsically to give to traffic, either terminal or intermediate.

The Committee went still further and stated :

" The Committee entertain the opinion that the announcement of an intention on the part of Parliament to sift with care the particulars of railway schemes . . . will produce very beneficial results in deterring parties from the attempt to entrap the public by dishonest reports, in securing railway projects against the shocks to which in periods of great commercial excitement it must be otherwise liable from such causes."

Following on the above recommendations, the railway branch of the Board of Trade was reorganised, and called the Railway Department of the Board of Trade. It has been more popularly known as the Dalhousie Board. It immediately set to work,

" and on November 28, 1844, the department intimated that the points it would particularly inquire into in regard to Railway Bills then before it were :

- (1) Ability and bona fide intentions of the promoters to prosecute their application to Parliament in the following session ;
- (2) National advantages to be gained ;
- (3) Local advantages ;
- (4) Engineering conditions ; and
- (5) Cost of construction, prospective traffic and working expenses."

The above citation has been necessary to set forth in clear lines the benefits which England might have gained by supporting the maintenance of the Board.

The existence of the Board was, however, short-lived. The reason is not far to seek. The existing companies' interests were identical with the concern of the Board. But the disappointed projectors were naturally against any control of the executive on their new schemes. Another reason of the opposition suggested is the secret nature of the proceedings of the Board.¹ The Select Committee of

¹ See evidence of R. Stephenson, Questions 2895, 2896, 2897 and 2898 : 2895. But if you allow competing schemes to go before Committees in the same session, will not the present system of heavy expenses now incurred be still required ?—I think the proceedings would be most materially curtailed by the Committee having the report of that Board, with all the facts before them.

2896. Is not that what happened with the Board of the last year ; the Committees had their reports upon the conflicting schemes ?—Yes.

2897. And that was a failure altogether ?—It so turned out, but not from any incompetency on the part of the Board, in my opinion ;^a I think

1846, known as Morrison's Committee, give the following reasons for the failure of the Board :

" Your Committee are happy to perceive that the causes of the failure of the Committee of the Board of Trade to answer the ends for which it was appointed, are satisfactorily explained by many of the witnesses whom they have examined. Mr. Robert Stephenson attributes the failure not to any incompetency on the part of that Committee but to the faulty system pursued by them in receiving evidence in private."

The failure of the Board, therefore, did not weaken the conviction of the necessity of an executive department.

Hardly a year had passed since the disappearance of the Dalhousie Board, when three more Committees pointed out the absolute necessity for the creation of such a department. The Select Committee of the House of Lords sitting in 1846 to consider, amidst other things, " what means may be adopted for diminishing extravagant expenses attendant on obtaining Acts of Parliament for legitimate and necessary undertakings, and at the same time for discouraging the formation of schemes got up for the mere purpose of speculation," made very pointed recommendations. Their report is very illuminating as giving an authoritative statement regarding the economic effects of the want of a " well-defined system for the accommodation of the country being laid down."

" Schemes have been frequently got up and Acts obtained by Parties, for the mere purpose of speculation, without any definite object beyond that of selling them to the companies with which they may compete, and existing companies have been compelled to project new lines, before either their own means would warrant

there was much less attention paid to those reports of the Board of Trade than they deserved.

2898. If the railway department of the Board of Trade of last year had been authorised by Parliament to carry on their inquiries, and had conducted those inquiries in open court, in the presence of the contending parties, would not in that instance much greater benefit than was derived from it have been obtained?—Most undoubtedly: the whole cause of the failure of that Board was, I believe, owing to their receiving evidence in the closet; I believe their failure hinged entirely upon that.

Cf. the evidence of Mr. Denison, the Chairman of the Great Northern Railway Company, on the defect of closed-door proceedings of the Railway Board.

their undertaking them, or the necessities of the district call for them, in order to protect themselves from rival schemes."

"The Committee have had their attention specially directed to the fearful amount of gambling consequent on the existing state of things, by which many persons have been entirely ruined and a demoralising effect extensively produced upon the humblest as well as the highest classes of society, while the trade of the country has been injured owing to capital being diverted from its ordinary channels . . ."

The same Committee, when coming to recommend the remedies to prevent this reckless building of railways, agree with the remarks made by the Railway and Canal Amalgamation Committee of the same year, and adopt them from their report verbatim :

"The system of railways and canals is now become so extensive and their relations amongst themselves are so complicated that no enactments passed by Parliament for their government and regulation can provide for all contingencies, or be properly carried into effect, unless by the aid of some more efficient machinery than any which exists at the present moment.

"After mature consideration your Committee have come to the conclusion that it is absolutely necessary that some department of the Executive Government, so constituted as to command general respect and confidence, should be charged with the supervision of railways and canals, with full power to enforce such regulations as may from time to time appear indispensable for the accommodation and general interests of the public."

• "Your Committee entertain no doubt that a department so constituted might in addition to these duties afford material assistance to Parliament in railway legislation. It might save, by preliminary examination as regards facts, much expense to parties applying for Bills, and much of the valuable time of both Houses, without in any way interfering with paramount powers of Parliament, and its sole adjudication as to rights of property."

"The Committee having had these various subjects under their consideration, seeing the evils of the existing systems, recommend the establishment of some department of the Executive Government on whom should be imposed the duty of considering the whole existing system of railway communication through the country, the best means of perfecting it, and of hereafter controlling the management by various companies in such a manner as to make the connection between their different

lines most conducive to the general advantages of the country, and most serviceable to its various local interests. . . .

" . . . They recommend, however, that all propositions for any scheme of railway should in the first instance be submitted to this Board, who should require the promoters to lay before them some general statement of its object and advantages, and such evidence of their capability and bona-fide intentions as might be deemed a sufficient guarantee on which to sanction further proceedings."

The Committee further refer to the evidence of one witness¹ in these words :

" One of the witnesses examined by the Committee is of opinion that all railways should be in the hands of Government, and leased to parties by whom they should be worked ; or, if not that, the country should be divided into districts, as pointed out by the existing trunk lines ; and that the public interest would be best secured by contrl combined with a certain amount of competition. . . ."

One cannot refrain from dwelling at some length on the third report of 1846. A perusal of this report will disclose several points similar to those which are characteristic of the recent legislation in England and America. This Committee was presided over by Morrison, who is certainly one of the most distinguished characters in the history of railways in England. His views were, however, too advanced for those times. The recommendations of this Committee, relating to the construction of railway lines, may be usefully reproduced :

" Your Committee conceive that the advantages of system in determining on railways are sufficiently obvious. The best system is that which, at the least expense, and with the least

¹ The witness referred to is Captain Lawes, who gave his evidence before the Gladstone Committee in practically the same words, but it is interesting to read his evidence on the advisability of the Government ownership of railways, in its bearing upon the problem of construction.

Q. 1358. What other advantages, besides unity of management and of charge, do you contemplate from the consolidation of railways ?—A prevention of very wasteful and mischievous outlay of future capital largely directed in the creation of lines that are valueless in themselves ; going into all the expenses of parliamentary conflict ; when made, going into the expenses of a distinct establishment, and when made, becoming of little value ; and which are then either bought for their coercive properties, and not for their useful ones, or they are bought for a quarter of their prices.

sacrifice of soil, affords the greatest facilities to intercourse, and the greatest encouragement to industry. By selecting an injudicious line the capital of the country may be unnecessarily wasted, and the population of a district may not derive all the benefit from it to which they are entitled. By constructing two lines where one would suffice, there is not only an unnecessary outlay of capital, but a waste of a portion of our territory. Besides, as the cost of conveyance diminishes with every increase of traffic, competing lines, by dividing the traffic, add to the cost of conveyance on the separate lines. In private concerns no sensible man employs more mechanical power than he conceives necessary for his purpose; but it is now almost universally admitted that not a few of our lines have been injudiciously traced, both with reference to expenditure of capital and local accommodation; and that in the fruitless hope of competition, rival lines have been sanctioned where they were not wanted."

After the general enunciation of the need of a system, the Committee propose to give effect to it by entrusting the powers of examining new projects to a board specially appointed to meet the various railway exigencies.

"Your Committee are, therefore, of opinion that the functions of the Board may, with safety, be extended to the supervision of the existing railways, and the determining in the first instance, subject, of course, to the control of the legislature, where lines should be constructed, and what projects should be entertained. It so happens that existing companies have an interest, in common with the public, in preventing wild and unnecessary projects for the construction of new lines from being put forward; and your Committee, therefore, anticipate from them no opposition to the confiding of such powers to the Board as may be necessary to enable it to interpose with effect in defeating foolish or fraudulent schemes in the outset. The receipts of these companies are always diminished by the construction of rival lines, and they are often put to heavy expense in purchasing them, and in buying off threatened opposition."

The evidence of Robert Stephenson,¹ who had considerable experience of railways in England and Belgium, was very forcible on this point. He averred that the "fact of the preliminary steps in railway schemes being subject to no control is the root of all the mischief in the railway world." He therefore very emphatically demanded that

¹ Refer to Questions 2865-2870. Report August 25, 1846, Vol. XIV.

"no project for the construction of a new railway should be allowed to be brought forward till it had been taken into consideration."

The unanimous demand of all the Committees for the year for the creation of a new department led to the passing of an Act on August 28, 1846. The Act constituted a body of five Commissioners who were to have all the powers of the Board of Trade transferred to them. It was understood that a further Act of Parliament was to authorise the Commissioners to report on railway schemes. But this was never done. With their powers thus left undefined, the Commissioners could not prove themselves indispensable or even very useful.

Their duration of office, besides, was continued during the years when the crash after the speculation of the forties had entirely suspended any new railway enterprise. The absence of promotion of new lines diminished to a great extent the need of the Commissioners. Professor Hadley set down their cause in a very graphic way: "Dalhousie's Board had died of too much work and too little pay; the Commissioners died of too much pay, and too little work." The Commissioners were abolished in 1851, as is well known, on the ground of economy.

"Although one can find a good deal of routine work to their credit to dispel the suggestion that they had too little work, yet there is nothing in their work which strikes one as of any material benefit to the public. For the absence of any such record is to be found in the quiet times during which they lived and not in their unwillingness or incompetency to work."¹

The next reason for the abolition can be clearly traced in the habitual jealousy of Parliament towards an outside body controlling railways.

At this stage it is necessary to indicate briefly the results of the uncontrolled promotion of railway lines during the forties, until it was checked by the crisis of 1847. Although the effects of unchecked construction of railways were overstated at the time, yet it is impossible to deny that railway speculation was one of the causes which hastened or accen-

¹ *Railroad Transportation*, chap. ix.

tuated the crisis of 1847, by creating a stringency of capital in the market needed for financing other trades.

The abolition of the Commissioners in 1851 did not, however, stop any further demands for the creation of some such body. As normal times returned, the necessity was more keenly felt. The Committee of 1853¹ once again were forced to emphasise the need of a tribunal entrusted with the duty of preliminary examination of a new line. They reviewed the whole position and pointed out that though justification may be found for the parliamentary private bill system in the earlier days when railways were considered to be a "nuisance of the most objectionable kind," things had completely changed.

"So far from the existence of any general prejudice on the part either of landowners or of towns against the neighbourhood of a railway, the absence of that mode of communication is regarded as an evil to be overcome by local exertions, if it cannot be surmounted through the instrumentality of any of the existing companies. On the other hand, public questions of the greatest magnitude, which had no existence before, have now grown up; and for their solution Parliament has made no specific or satisfactory provision."

Then they lay down the defects of the existing system.

"A line projected may be advantageous, and entitled, according to the rules by which parliamentary committees are now guided, to a finding favourable to its projection, and still it may not be the most advantageous line or that which upon a wider view of the general public interest ought to be adopted."

In the same paragraph they dispose of the argument raised, that the public advantage is incidentally discussed by the opposing parties, thus:

"That the main question in which the good of the whole community is involved, should be raised not incidentally, but directly, and that all the rules of the proceeding, and all the energies of the tribunal, should be mainly pointed to that object."

The second defect of the system is forcibly put: "It is no disparagement of the private Committees of the House

¹ Cardwell's Committee, Vol. XXXVIII, 1853. Fifth Report, pp. 12 and 13.

to say that their decisions are regarded out of doors as fortuitous and inconsistent with each other." This charge they examine in the light of the policy with regard to gauges to be adopted. In spite of the recommendations of the Commission appointed in 1845 to investigate the merits of the rival gauges and to lay down some general rules to guide Parliament in future, which were adopted by the Houses by an Act of Parliament, the rules were made ineffective by the system of parliamentary Committees. In the words of the Committee :

" But what Parliament had thus undertaken to settle by general legislation, Parliament, in compliance with the finding of private Committees upon the circumstances of each case, forthwith proceeded to unsettle . . . "

Proceeding to recommend the method of curing these defects, they start with the premise : " Nor is it possible that this should be otherwise, while the rules of parliamentary proceedings on private bills remain unaltered." They further lay down that it is futile to lay down general rules, unless it can be provided that they are applied steadily according to the circumstances which arise from time to time.

" Hence all the most intelligent witnesses whom your Committee have examined have pointed to some tribunal which might be invested by Parliament with so high a degree of authority as to give weight and stability to its decisions ; and thus create in the public mind a certain anticipation as to the result of parliamentary conflict, discourage idle or unprincipled speculation and give to railway property that confidence which is not only desirable to the holders of that property, but might be made eminently conducive to the public mind."

But in spite of this firm conviction of the necessity of such a body the Committee were of opinion that this tribunal " cannot be erected without the walls of Parliament." No doubt the justification of their opinion lay in the general consideration of the nature of representative government and in the experience of the endeavours which had been made in that direction. They recommended, therefore, the creation of a permanent Committee of Parliament. Judging

from the amount of railway work, specially with regard to railway bills, the need of such a Committee was obvious. The following table of the number of Committees sitting each year to hear the railway bills is significant :

In 1846 . . .	64	committees have sat for 867 days
" 1847 . . .	52	" " 635 "
" 1848 . . .	14	" " 176 "
" 1849 . . .	11	" " 73 "
" 1850 . . .	15	" " 113 "
" 1851 . . .	14	" " 131 "
" 1852 . . .	15	" " 137 "

The constraint with which they recommend a departure from the present system may be fully appreciated when they enlarge on the methods which the permanent Committee should adopt in disposing of railway bills. They suggest :

" Having adopted a principle of territorial arrangement, they would divide the bills into groups and distribute them to separate Committees, composed of, or at least presided over, by members of their own body, assigning to each division of the Kingdom such members as happened to be free from personal interest in, or parliamentary connection with each district respectively, reserving for the consideration of the whole Committee questions of general principle, and making such arrangements as might be requisite for the schemes which intersected the divisions."

These recommendations were sought to be given effect to not by a legislative enactment but through the medium of a Committee which was appointed about the same time to revise the standing orders.¹ This Committee established by one of its orders the General Committee on Railway and Canal Bills, a body which would meet the recommendations of the Cardwell Committee. It seemed at first that this Committee was going to be a useful adjunct to Parliament in considering railway bills, and sometime the number was increased to forty members; but "it soon lost most of its initiative and became more or less a mechanical body with little idea of fulfilling the duties which Cardwell's Committee had mapped out for them."² The Committee was not

¹ Select Committee to revise standing orders 1852-53. xxxiv.

² Cleveland-Stevens : *English Railways*, p. 200.

given any definite powers of deciding on questions of principles as had been recommended.

Still another Committee was to report on the necessity of a separate tribunal and point out the failure of the General Committee to attain its end. The Select Committee, 1858,¹ received a mass of valuable evidence which demonstrates fully that no change had yet come in the method of procedure, and therefore in the matter of uniformity of decision or the costliness of proceedings. But out of the labour of this mountain only a mouse appeared. The report made no advance towards recommending a separate tribunal.

The question was, however, to remain a live issue for some time longer. The Select Committee of the House of Commons, which was appointed in 1863 to inquire into the existing system of private legislation, examined a number of eminent witnesses who disapproved of the present system. But in their recommendation they showed that languid temperament which comes of a disheartened mind. Repeated experience of the treatment meted out to the recommendations of previous Committees had convinced them that Parliament will not part with its powers over railway schemes.

"Various proposals for some new form of tribunal were brought forward, but in consequence of the large discretion which must be vested in any tribunal, however constituted, to which the duty may be entrusted of adjudicating on contested private bills, it was considered inexpedient for the duty to be performed otherwise than by Committees of the Houses of Parliament."²

The Committee of the House made, however, recommendations for the passing of an Act to enable new and existing companies to make new lines of railways if they satisfied certain conditions to be specified in the Act, and obtained the sanction of the Board of Trade by a certificate. This took the form of the Construction Facilities Act of 1864. To this extent, authority was handed over to the Board of Trade to sanction schemes for extension, but in

¹ *The Select Committee on Railway and Canal Legislation, 1857, 1858.* Vol. XIV.

² *Royal Commission of 1867. Report, p. 21.*

view of the further provision prohibiting any branch lines being authorised in face of the opposition of the railway company affected by it, or by any of the proprietors whose land is required for the purpose, the Act has been ineffective in its operation.

The sixties of the nineteenth century mark the development of the idea with regard to private bill legislation, which is aptly put as one "that a separate jurisdiction, rather than a legislative body, was the chief requirement for railway problems."¹ The old idea of a tribunal independent and distinct from Parliament has gone into the background.

The report of the Royal Commission of 1867, valuable as a masterpiece of railway history in the United Kingdom, made no constructive suggestions or criticism. Their report gives rather an impression that they found the existing system satisfactory, and one which had served a useful purpose. After their review of the present system of private bill legislation, in which they confess to the defects which had been pointed out by the witnesses, and which it must needs be added were only a repetition of what has been shown in the above lines to have been so often affirmed by the previous Committees, they start on a line of argument which was novel. "This system of considering each application for a railway upon its own merits without reference to any preconceived scheme for the general accommodation of the country may have led to a larger expenditure of capital than was necessary."

"In some cases each company which had access to some particular town has been allowed to make a station where a joint station would have been far more convenient and less costly. In other cases two lines have been allowed to run side by side where one line to accommodate both companies would have sufficed. But on the other hand, the freedom from defined principles of action in granting new lines had led to a much more rapid development of the railway system, and consequently of the trade of the country, than could otherwise have taken place, and to a greater regard being paid to the special wants of particular branches of industry and commercial communication."

¹ Cleveland-Stevens: *English Railways*, p. 211.

The Commission then enlarge upon the necessity of appeal to Parliament by adding that the commercial and other interests at stake are so great and the railway interests so powerful that neither party would consent to have questions of important conflicting schemes settled by any tribunal without a power of final appeal to Parliament.

The Commission then go on to state that absolute uniformity in the provision of the Acts is neither necessary nor desirable. In support of this statement they quote the opinion of the French Commission of Railways in 1863, that in comparison with the systems in other countries the French system of *a priori* rules prejudiced and retarded the progress of railways in France by an adherence to a preconceived system, and that it should be relaxed. The above remarks have been often quoted in support of the theory that *laissez-faire* policy is the one that is best calculated to develop the railway system of the country. In fact the Commissioners seem to have been greatly impressed by the opinion of the French Commission. But it must be pointed out that the departure the French Commissioners were suggesting was not in the direction of relaxation of Government control, but that there can be no rigid adherence to any principles which may have been laid down several years earlier. Railway construction was a progressive science and any rules were likely to get out of date in a short while by further light being thrown on the subject. What the previous Committees and able witnesses like James Morrison and Robert Stephenson had been insisting on was not that any general principles be laid down, but that a department be established which will take a comprehensive view of the needs of the whole country.¹ To

¹ Cf. the view of Robert Stephenson expressed in his inaugural address as President of the Institute of Civil Engineers, quoted from the addendum sent in by Mr. E. Chadwick, a witness before the Royal Commission, 1867, p. 857. "What we ask is knowledge. Give us a tribunal competent to form a sound opinion. Commit to that tribunal, with any restrictions you think necessary, the whole of the great questions pertaining to our system. Let it protect private interests from railways. Let it judge of the desirability of all initiatory measures, of all proposals for purchase; . . . delegate to it the power of enforcing such regulations and restrictions as may be thought needful to secure the rights of private persons or of the public; . . . give it full delegated authority over us in any way

our mind, they only emphasised the statement which the earlier Committee of 1853 made, that no general legislation can help to mend the defects of the existing system. If their argument meant to dispose of the suggestion of an Executive Department made by the previous Committees, there is no hint to that effect. No advocate of a central department fitted to view the railway system as a whole had suggested uniformity of construction; and it is precisely this point which the Commissioners dispose of as undesirable. To follow their argument:

"Nor do we consider absolute uniformity in the provisions of the Act either necessary or desirable. The cost of a railway varies from £4,000 per mile to possibly £1,000,000 per mile, according to the district in which it is placed. For instance, a densely populated district, occupied by a manufacturing or mining population, has far different wants from an agricultural population; and the mountain districts of Scotland, or the sparsely inhabited portions of Ireland, could be supplied with railway communication suited to their wants by means of a different mode of construction from that necessary for S. Staffordshire or the Metropolis."

The bearing of the quotation of the French Commission is only with regard to this point. When it is remembered that both in France and Belgium there exist what are known as *Les Chemins de fer d'intérêt local* and *vicinaux*, railways on an extensive scale, there should be no fear that Government control would have made a fetish of uniformity of construction.¹ It is true, however, that at first local railway schemes did not sufficiently take account of the local character of the lines.² The years immediately preceding the report of the Commission had indeed witnessed a remarkable growth in the mileage of railways in the United Kingdom. Captain Galt, examined on November 7th,

you please, all that we ask is that it shall be a tribunal that is impartial and that is thoroughly informed, and if impartiality and intelligence are secure we do not fear the results."

¹ Cf. the views of James Morrison, the greatest advocate England has yet seen of furnishing the country with a comprehensive system of railway lines, on the construction of cheap railways for agricultural areas, *Second Report of Select Committee of 1846 on Railway Acts and Enactments*, p. vii.

² Emile Sax: *Verkehrs-mittel*, 1922, Vol. III, p. 142.

1865, had stated that the mileage was over 13,000 miles,¹ but this rapid increase was bound to meet with its Nemesis in the crash of 1866. This was followed by another check to railway activity. We shall examine hereafter the effects of these speculations on the growth of railways in the country.

There is still another Committee whose opinion in the matter of competition in railway construction may be noticed. This Committee sat in 1872. Examining the question as to how far the interests of the companies would be identical with those of the public, they laid down that it was the interest of the railways to develop traffic whenever that traffic produced them profit.

"It is to their interest to encourage new and promising traffic, even though their immediate profit may be little or none; it is to their interest to foster new routes and maintain them against existing competition; to develop new ports or harbours; and to promote competition between distant seats of trade or manufacture by neutralising the distances which nature has placed between these seats and various markets for their products. In all these cases the wealth and resources of the companies enable them to incur present loss for the sake of future advantage." . . .

But there are limits to this coincidence of interest. After enumerating various points of difference of interests they say:

"and lastly it is to the interest of the public that branch lines should be made, but it is not in the interests of the company to make them unless they will pay good interest on the capital expended." ²

When they come to discuss the regulations suggested to help the construction of branch lines they commence the discussion by summarising the existing situation thus:

"It cannot be supposed that railways have reached their full development. The most important lines have been made, but there is every prospect of a constant demand for branch and feeders. It is not likely that many of these will pay such interest

¹ Question 7344. Evidence before the Royal Commission. Cf. Rys. 1865-7.

² *Select Committee on Railway Companies Amalgamation*, 1872, p. 30.

as the existing lines do, and some will scarcely pay working expenses. Under these circumstances, while they will be of great advantage to their respective districts, the existing companies will have little motive for making them, and will no doubt oppose vigorously any attempt of rival speculators to introduce independent lines into the heart of their systems."

The concluding remarks are rather difficult to appreciate. If the suggestion was that such rival speculators should have been left unopposed to enter the field in spite of the fact that they could not exist by themselves, it is uneconomic. The only line that is likely to benefit by the opening of a new branch is the main line, which gains also by the increase of traffic on the old line.

Since 1872 the question of railway construction has been relatively unimportant, and no committee has been asked to tackle the problem.

SECTION II

THE EFFECTS OF COMPETITION ON DEVELOPMENT

It will be useful, after this review of the construction period in England, to see how far competition has been successful in developing railway facilities in England.

In the first place, it must be pointed out that the encouragement of speculation can never be a proper method of increasing the mileage of railways. Let us examine the effects of speculation in railways in 1847 and 1866. The periods immediately preceding 1847 are instructive.¹

	Number of Acts.	Mileage sanctioned.	Capital powers.
1844	57	805	£20,500,000
1845	120	2,700	£59,479,500
1846	270	4,358	£132,617,368
1847	390	1,354	£39,460,128

The above figures are indeed significant, and if the construction had really taken place in those years we should be forced to conclude that speculation is a powerful factor in the extension of railway schemes. As many as 8,500 miles of railways were sanctioned, but if the schemes are in advance of requirements they will have to be given up.

¹ Refer paragraph 30, Royal Commission of 1867.

To meet the difficulty created by the situation, the period of construction had to be enlarged, and this was done at the end of 1847, by an Act, and in 1850 another Act was passed to enable the railway companies to abandon the powers for proceeding with portions of their undertaking. Under the latter Act no less than 1,560 miles were abandoned by the promoters. The following years meet with a sudden check to any new promotion. The following table will be instructive as showing the actual rate of growth of the railway system.

1842	1,857	1849	6,031
1843	1,952	1850	6,621
1844	2,148	1851	6,890
1845	2,441	1852	7,336
1846	3,036	1853	7,698
1847	3,945	1854	8,954
1848	5,127		

Cf. Cleveland-Stevens, p. 164.

At the end of the year 1844 there was already a mileage of 2,148. During the years 1845, 1846 and 1847 the mileage sanctioned was 7,800, but we see that at the end of 1854 mileage added was only 6,806. Deducting from the sanctioned mileage of 7,800 the mileage abandoned under the Act of 1850, there were still 6,204 miles of the mileage sanctioned in the years 1845, 1846 and 1847, which had to be built. Virtually, until 1854, no new schemes were laid before Parliament, and it was only the old sanctioned schemes that were spread over the whole period.¹ It is, therefore, wrong to conclude that speculation can be an element in the extension of railway systems. It is more proper to say that it gives a set-back to the new construction. Naturally, when shareholders are paid little for their shares, they are unwilling to subscribe new capital required for extension.

¹ Refer to the paper read by Dudley Baxter, M.A., read before the Royal Statistical Society in 1866, reproduced in the *Journal* of the Society, p. 549. "The railway mania broke out with redoubled violence; railways appeared an El Dorado. The number of miles then open was 2,148 (1844). The number of miles sanctioned by Parliament in the three following sessions was 8,592. Had all these lines been constructed, we should have had in 1852 more than 10,700 miles of railway, a number which was not actually reached till 1861, or nine years later."

Another crisis of 1866 preceded by the speculation of the sixties may also serve as illustrative of the tendency of speculation to check the growth of railway construction. As compared with 9,542 miles of railways which the United Kingdom had reached in 1858, the figure reached over 13,000 in 1865, and showed a total of 15,537 in 1870. As usual, this over-extension was followed by another reaction, and we are informed on the authority of Captain Tyler that the wreck following on the panic of 1865 led to the failure of many schemes then projected :

"and 42 warrants of abandonment have been issued by the Board of Trade under the Railway Companies Act, 1867, having reference to 515 miles of railway for which parliamentary power had been obtained and which were in various stages of inaction, commencement, or progress. Between 1858 and 1870 Parliament had authorised the abandonment of about an equal mileage."

His concluding remarks make a particular mention of how the speculation of the period retarded new construction.

"The construction of new lines, excepting of those undertaken by wealthy companies, almost ceased after that panic; and though there is an indication of returning confidence on the part of the public in subscribing to schemes plausibly advocated, it will be some time before railway construction can be expected again to proceed at the same rate and under the same system as before 1865."¹

It is, therefore, not true to say that speculation has been responsible for the extension of the railway net of England. The most potent factor in the growth of the railway system has been the fact that the transport service has always been an important influence in the growth of traffic. No one was able to foresee how the facilities of railways would create a demand for it, which was almost non-existent before. It was this factor which more than any other has led the railways through difficult times to normal ones and enabled them to regain the steady growth which was sometimes checked by a period of speculation. Captain Tyler refers to this point in his paper handed in by himself :

¹ Appendix N. Select Committee of 1872, p. 828.

"It was only the extraordinary elasticity and progressive increase of railway traffic that enabled some of the former to return more readily, and others more gradually, to a condition of prosperity, whilst certain companies which had previously been really or apparently wealthy and prosperous, have never yet surmounted, and never can entirely recover from the difficulties into which defective or vicious management so deeply plunged them."¹

The type of speculation of this period was different from the speculation of the forties. The period following the speculation of 1847 saw an end of shareholders' lines.² Amalgamations had produced large companies which in competition between themselves for the possession of the country financed a large number of lines which could not have been built otherwise. This was certainly not so objectionable a form of competition by which the public benefited, and produced to some extent the same results which were achieved in other countries by the Government forcing the old companies to build new lines whenever their profits exceeded a reasonable figure. Mr. Baxter in the paper above referred to shows that the increase of the average mileage of the United Kingdom during this period was 400 miles per annum. But the construction of the new lines by the old companies has its check in their yield of income. "Towards the end of 1858 the great companies had exhausted their funds and ardour, and proposed terms of peace." Another state of things arose to stimulate the extension of railways. The system had grown up gradually under the wing of the companies, and it came to the front aided by a great improvement in the value of railway property, on which the percentages of profits to capital expended had gradually risen from 3½ per cent. in 1850 to 4½ per cent. in 1860.

"Twenty years of railway construction had brought forward many great contractors, who made a business of financing and carrying through lines which they thought profitable. This gradual improvement in the railway property once again brought in a period of over-extension with its subsequent check by a depression which is the natural regulation of excessive specula-

¹ Appendix N. Select Committee 1872.

² Cf. R.S.S.J., p. 553.

tion. During the years 1861-1866 Parliament authorised seven thousand three hundred and twenty-three miles :¹—

Year.	Miles.
1861	1,332
1862	809
1863	795
1864	1,329
1865	1,996
1866	1,062
<hr/>	
Total	7,323
Average	1,220 "

In the year 1860 the mileage open was 10,434. In 1865 the mileage recorded was 13,289.² In 1870 England had reached an open mileage of 15,537.³ Here, there is no such severe check as was experienced after the speculation of 1847. The construction of the sanctioned mileage was spread over a large period and only about 1,000 miles were abandoned. Summarising the railway history of the period, one might say that the distress and losses which had overtaken so many shareholders worked the necessary cure after more or less blundering. Mr. Baxter's remarks in section xii. of the same paper are interesting :

"I cannot advocate the necessarily wasteful system of contractors' lines, or believe in the principle 'Never mind who is the loser, the public is benefited.' Railway extension is not promoted in the long run by wasteful financing and ruinous project. On the contrary, such lines injure railway extension by making railways a byword, and depreciating railway property, and they render it impossible to find supporters for sound and beneficial schemes."

Subsequent history shows that these checks by speculation were not permanent. It must be recognised, however, that the ease with which the railway extension regained a normal rate of growth was not due to the prevision of the speculators, but to the enormous amount of elasticity which the railway industry has shown.

¹ The above table taken from the paper by Dudley Baxter, *R.S.S.J.*, p. 354.

² Reference, p. 553. *R.S.S.J.*, Vol. 29.

³ Cleveland-Stevens. Table at p. 237.

Speculation in railway construction not only landed the shareholder in distress, but also checked the extension of the railway system for some time until an entirely new factor which had not been appreciated by the speculators enabled the country to tide over the period of depression. If we follow the financial position of the railways during the earlier period of construction it will be abundantly clear how the loss to the shareholders is immediately reflected in a check to the railway extension.¹ In the year 1849 the average rate of dividend on ordinary capital was 1.88 per cent. In 1850 it was 1.83 per cent. It rose in 1851 to 2.44 per cent.^{*} In 1852 it was 2.40 per cent. : in 1853 it showed 3.05 per cent. : in 1854 it was 3.39 per cent. : in 1855 it was 3.12 per cent. : in 1856 it was 3.40 per cent. : in 1857 it was 3.60 per cent.¹ If we recall the history of the railway construction of the period, we should know that the period following 1847 until 1853 practically saw no movement in the direction of new schemes. The mileage opened every year will not be a misleading guide, as the sanctioned schemes of 1845, 1846, and 1847 were spread over the subsequent period. To quote the words of Dudley Baxter : " Had all these lines been constructed we should have had in 1852 more than 10,700 miles of railway, a number which was not actually reached till 1861." It was after the average rate had regained its normal level that an impetus was given to further extension. The rate of interest in 1860 rose to 4.33 per cent., which brought in a period of further speculation. We have seen above that between the years 1861 and 1866, 7,323 miles were sanctioned. The extension, therefore, of railways has been coincident with the periods of prosperity to the shareholders.

Another way in which the loss to the shareholders will react upon the public is by an increase in the cost of working the lines. It is only an economic truism to state that, other things being equal, the dividend to the ordinary shareholder is an index of the security of the property, and according as the yield is higher or lower, the value of the security

¹ *R.S.S.J.*, p. 276 (1859). "Financial Prospects of the British Railways," by Brown.

rises or falls. The rate of interest at which a loan can be raised is in the inverse proportion to the value of the security. If, then, the value of the security is high the rate at which loans can be raised will be low. . . . The higher the rate of dividend on the ordinary capital, the lower will be the rate of interest on loans. Nearly in every case when the dividend falls, there is a less number of shareholders coming forward to subscribe to capital, and a company is forced to increase its loans. The higher rate on these loans goes to increase the interest charges, an important item in the working charges of a railway company. These in their turn must ultimately pass on to the consumer, though in the first instance these higher charges may be met by a reduction in the rate of dividend to the ordinary shareholders.

It is, therefore, generally right to say that the extension of railway construction depends on the prosperous state of the railway industry. The contention, therefore, is that in order to get the maximum benefit of extension, the proper course is not to encourage reckless competition, but so to arrange the progress of the railways that the interests of the shareholders are kept in view by yielding a steady return to them warranted by the conditions of the money market. It is a false belief that *reckless* competition has been a source of the growth of the railway system in England. It is more true to say that it has caused at various stages, especially two, a hindrance and a check to the development of railways, which might have been disastrous were it not that the railways came to their own help by creating new traffic where it did not exist and thus helped themselves to tide over the financial depressions thus created. The method of extension of the railway system in this country may be thus epitomised in the words of Mr. Galton: "By the follies of the speculators, more than by legitimate enterprise, the railway system thus extended with unhealthy rapidity, until the inevitable result was at length experienced." But for the favourable circumstances which relieved the railways from the depressing effects of reckless competition, the speculators cannot congratulate themselves. They were such as had not

been anticipated by those who indulged in speculation.

Another defect of this uncontrolled competitive method of construction is the disorderly method in which the country is served. This defect was partly righted by means of the amalgamation of several companies into a few big ones, but it acts in a blundering, wasteful fashion, for which the country has ultimately to pay. Committee after committee emphasised the need of a comprehensive scheme which would reach every part of the United Kingdom. Instead, uncontrolled competition has furnished this country with a net of railways, which, though it supplies extremely well the Metropolis and connects it with the great centres of commerce like Manchester, Liverpool, etc., reaches very inadequately the agricultural areas of the Kingdom.

The problem of accommodating the agricultural areas has been more acutely felt in recent times. It has become clear that unaided private enterprise will not come forth to undertake the development of transport service. In spite of the Light Railways Act, 1896, which permits of economy in capital outlay and cheapness of construction, the outstanding fact remains that no private enterprise will be forthcoming. Nor is it intended to say that private companies should undertake the work from an entirely philanthropic point of view. The object is merely to emphasise the fact that there is need of further development of transport service and that it is not possible to rely upon private efforts alone. The following extracts¹ will be useful as an authoritative statement of the lack of communications for the agricultural areas:

"According to the Light Railway Commissioners, experience satisfied them that light railways were much needed in many parts of the country, and that many of the lines proposed, but not constructed, were in fact necessary to admit of the progress and even the maintenance of existing trade interests, and that improved means of access were requisite to assist in retaining the population on the land, to counteract the remoteness of rural districts. . . . They pointed out that during the first five years the Act was in force, there were 315 applications for orders, 142 applications only in the second five years, and

¹ *Encyclopædia Britannica*, 1911, p. 857.¹ Railways.

proposals for new lines had become less numerous owing to the various difficulties in carrying them to a successful completion and the difficulty of raising the necessary capital; and even when part of it was provided with the aid of the State and of the local authorities.

The point to bring forward is that the phenomenon of uneconomic distribution of railway construction, with which one is familiar on the Continent, and which was to a great extent the cause of the Government's stepping in, is not entirely unknown in England. The inevitable result of uncontrolled competition in construction is that whereas the private enterprise is abundant in parts of the country which are rich and already well served, the poorer districts are left to the Government to be developed. The only way to avoid this defect of uneconomic distribution is to throw the burden of poor lines on the richer lines. This could be achieved either by the Government taking charge of the railways, or by imposing a control over the companies and compelling them to undertake the construction of poorer lines. Of course, this could be done only by safeguarding the interests of the shareholders and stockholders of the richer company.

This aspect of the question had appealed to the minds of the thinking people in this country from the very commencement of the railway industry. James Morrison and Robert Stephenson had both cried aloud against relying upon competition to develop the traffic facilities in England. While the former believed that the best method calculated to serve the transport needs of the country would be for the Government to undertake the task—"for the railways are as necessary as the air we breathe"—the latter believed in an intelligent method of control to achieve the end. The evidence of Robert Stephenson before the Committee of 1853 is interesting on this point.¹ To summarise the whole position, his view was that if England had been more careful in an "arterial system" the profit on the arterial system could have been partly utilised in the construction of branch lines in proper places and "not in

¹ Select Committee of 1853—*Report of Evidence on Railways and Canals Amalgamation*. Questions 1005, 1006.

improper places as they are now." By this means much better accommodation would have been given to the new districts connected with the main lines.

"That system if carried out would have multiplied the resources of this country more than the present system has done because at present the amount of capital has become more and more cramped, and there is less and less energy in it. There is less surplus in consequence of ruinous competition and, therefore, railways have no surplus to accommodate the country through which they pass."

Incidentally, another point has been discussed in his evidence, which also may be considered here. Mr. Stephenson was pressed by one of the members of the Committee to say if the amount of railway advantages had not tended materially to develop the resources of England. His answer to the question is deserving of careful consideration. He said that what he was trying to show was that the railway development could have been better done and with less money. He further believed that the then existing system, if allowed to go on, would aggravate the evil. Speaking of the competitive method of building railways, he said that the same advantages and accommodation could have been had with less money if an intelligent control had been substituted.¹ Reference has been made to this point to show that in the comparisons of methods of developing the railway system, we have got to consider not whether a certain method succeeded or not, but whether some other method would have been as, or more, efficacious, and at the same time more economical. Comparisons with the state of things as they existed before the railways were introduced with what happened after their introduction is hardly a method of comparison. No one denies the enormous superiority which the railways had over other means of communication. This superiority was not imparted to the railways by the private enterprise, but was inherent in the railway industry itself. Still, it is interesting to note that the several gentlemen who have appeared before various committees have fallen into this grievous error of

¹ Robert Stephenson, Questions 10001, 10002, 10003.

making such comparisons. One can almost hear them say, "Witness the numerous benefits which private companies have conferred upon the public by furnishing the railways! Compare the state of England's commerce and the prosperity of the English public to-day with that of the days of the stage coach! Having owed all this to the enterprise of individuals, is it not ungrateful to call their methods wasteful and uneconomic!"

A word may be usefully added to indicate the direction in which thinking people in this country are now beginning to move so far as new railway additions are concerned. There is a very striking paragraph in the white paper issued by the Ministry of Transport in 1920. The proposal contemplated in this paragraph has not been incorporated in the Railway Act of 1921, but it is, nevertheless, deserving of serious attention. In this paper it was proposed that in return for the extension of the "charter" of the companies the State should be entitled to participate in the surplus revenues. The share of the State was to go to form a "Development Fund."¹ It is observed that it was not contemplated to throw the Government's share of the surplus revenues into the general revenues of the country.

"Much development work has to be done which is beyond the financial resources of the localities, and the intention is that the Government's share of these surplus profits should be funded for development purposes, to assist backward districts, to develop light railways, and for other appropriate purposes in connection with transportation, as may be approved by Parliament in the Act."

¹ Cf. the Contingent Fund instituted in U.S.A. by the Interstate Commerce Act, 1920. It is provided that the profits exceeding a certain percentage, called fair return, will be held by the general groups of railways as trustees for the United States. Half of it which is retained by the carrier companies goes to form separate reserve funds of the same companies, and the other half is to be paid to the Commission for the purpose of establishing and maintaining a general railroad contingent fund. The reserve fund of the companies is to be used mainly for warding off the fluctuations in the returns on capital. The general railroad contingent fund is "to be used by the Commission in the furtherance of the public interest in railway transportation, either by making loans to carriers to meet expenditures for capital account; or to refund maturing securities originally issued for capital account; or by purchasing transportation equipment and facilities and leasing the same to carriers, as herein provided."

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CHAPTER II

PRUSSIA

SECTION I

THE BEGINNING OF RAILWAYS

WHILE turning to Germany to disentangle the relation of the State to the railways, it has been found necessary to concentrate one's attention only on Prussia because (1) there has never existed until recently a German State with German railways; ¹ (2) any such attempt would have lost in depth what it would have gained in breadth, and would have presented an incoherent and diffused picture; (3) Prussia is the most important part of Germany. In the early experimental stage of the railways, the conditions in Germany for the acceptance of the new revolutionary change in the transport methods were decidedly more unfavourable than in England. Railways required large outlays of capital, which could be forthcoming only when there was a reasonable prospect of meeting the interest. This prospect was naturally less hopeful in Germany than in England where commerce and industry were both developed, and where there was no lack of capital and enterprise. Germany had not yet recovered from the wounds of Napoleonic wars; industry and commerce were only beginning to develop again, and were entirely absent in large tracts of lands; the political division and mutual jealousies of the States stood in the way of any progress which disregarded the small boundaries, and even injured

¹ The first attempts at uniting the railways of the whole of Germany into an Imperial system were made by Bismarck, but they failed owing to the opposition of the Middle States of Germany. The revolution after the war which resulted in the change of the whole Constitution of the German realm brought also a transference of the railways of the different states to the German Reich (realm).

the enterprising spirit of individuals ; private capital was only available in a limited degree ; the financial situation of the State made it impossible for it to step into the breach, even when it so wished.

In Prussia the first efforts to construct a railway were made in the west provinces of Prussia, where, after the wars of freedom, and especially after the introduction of the Puddling system, the iron industry and, in its sequence, the coal industry had begun to develop. But even here private enterprise was not very venturesome. Out of the four proposals, two failed because the State refused to participate in the construction.

In the east of the monarchy, the conditions for railway enterprise were still less favourable. Industry and commerce were still in their swaddling clothes except in a few places. On the other side of the Oder, they practically did not exist, except perhaps for Danzig and Königsberg. The easterly parts had suffered still more severely from the Napoleonic wars, so that capital and enterprise were still more timid than in the Rhineland and Westphalia. Added to this, the eastern provinces were favoured by nature in their navigable waterways, and the artificial roads in the plains of the east were more useful and serviceable for purposes of goods traffic than in the hilly parts of the west. All these circumstances were unfavourable to the development of the railways in the east. Only Silesia occupied an exceptional position. It had already developed textile and mining industries in the whole of the eastern provinces, and was perhaps relatively the richest in its resources of capital. On the other hand, Silesia lacked most the means of transport ; the river Oder with its strong rapids and changing conditions of water, made the regular service of steamers much less possible than in the waterways of the west. In Upper Silesia the land-routes left a great deal to be desired ; in Middle Silesia the hilly surroundings suited the traffic needs as little as in the Rhineland and Westphalia. It is therefore not to be wondered at that the suggestions of railways in the west found their echo precisely in these parts of the east.

In the year 1835 the Government was therefore faced with a decision on the new projects of railways issuing from the east and the west of the Kingdom. The Ministry met these new petitions by issuing "General Stipulations" to which they had to conform. These stipulations were to form the basis of further negotiations for granting the concession.

Soon after, in 1838, owing to the difficulties which resulted from this method of granting concessions, the Government had to search for a firmer and more suitable basis than what could be afforded by mere "General Stipulations." As a consequence, "a law to regulate the railway undertaking" was passed, parts of which are still in force.

"The railway law of 1838 concerns only limited companies. A company has at first to acquire for the line the sanction of the Sovereign, pointing out the route which it is to take, and the amount of capital which it requires. Then within a period prescribed by the Minister of Commerce, who prescribes also special stipulations, the subscription of the capital must be proved and once more the statute must receive the confirmation of the Sovereign. The company receives a right to expropriation and use of land necessary for the purpose. It is pledged to complete its work within the period prescribed, failing which the State has the right to step in and construct on account of the company. The opening of the line must be subject to the sanction of the State. . . . The construction of a new line between the same towns, touching the same main points on the route, though a new enterprise, shall not be sanctioned. On the other hand, the companies must consent to the further continuation of the line or the construction of the side lines, or, for this purpose, even to the laying of a double line, which must be sanctioned by the Minister. The alteration or completion of these stipulations of law may, however, be made either through a general law or a special concession."¹

¹ The above law of 1838 requires some more detailed mention in regard to points other than those relating to the subject of Construction. The first point deserving mention is that even until 1838 people had not yet given up hope of being able to preserve competition between several enterprises constituted for merely running separately owned vehicles on the same line. This law therefore provided that the monopoly of running the traffic on its own line is conceded only for a period of three years. After this period, others who obtain the sanction of the Minister may be conceded this right, provided a proper compensation is given to the owner of the line. This law lays down general principles under which the terms of compensation may be regulated, but in cases of disagreement between the parties, the question must be decided upon by a competent authority.

The above law, although it put the methods of concession on a firmer basis, did not however result in any further encouragement of the railway enterprise. About this time, the hopes which had been entertained in foreign countries about the enormous profits from the capital invested in railways were found to be extravagant. This fact also was not without its discouraging influence upon the private enterprise in Prussia. The close of the year 1841 witnessed only a mileage of 395 km.

SECTION II

THE PARTICIPATION OF THE STATE IN THE CONSTRUCTION OF RAILWAYS

In the meantime, the advantages of railways for the public welfare began to become clearer and clearer. But on account of the inherent timidity of German capital then, and partly on account of the discouraging results elsewhere, private enterprise showed itself lacking in initiative to go on with the construction of the railways. On the other hand, the State was prevented by the law of 1820 from incurring any debts without the sanction of the feudatory states. But the monarchs then were unwilling to convene them to get their sanction. Without loans, however, the State could not build railways. Besides, according to the ideas then prevalent in governmental circles of Prussia, railways were considered to be a field

of the State. Secondly, in regard to the tariff question, this law takes the same position as was taken later in England by the Gladstone Act of 1844. Both the Acts, one is tempted to imagine, took their inspiration from the Manchester-Liverpool Railway Act. The latter provided that for three years commencing with the birth of the undertaking, the regulation and fixing of tariffs may be left entirely to the sweet will of the enterprise; after this, the tariffs may not be higher than what will yield an interest of 10 per cent. on the capital outlay. In order to make it possible to control the conditions and the level of the tariffs which the users of the railways have to pay, the companies must keep accounts according to the manner prescribed by the Minister. But these provisions of the law were, in reality, never called into play because (a) the occasions for such interference were few and far between; (b) there lacked a competent executive organ which could have enforced the provision of the law.

for private enterprise in which the interference of the State would injure the industry, the enterprising spirit, and above all, the whole interest of the people in the railways. Being debarred by law from incurring a debt, the State at first tried to encourage the further construction of railways by using its influence on the "Seehandlung"¹ to participate in the enterprise of the Berlin-Anhalter Railway through the purchase of shares and the granting of loan to the extent of 1,400,000 thalers.²

But this was not sufficient encouragement if the State wanted to promote the construction of any moderately comprehensive scheme of railways. Once the State finances had been favourably shaped, the State saw itself seriously confronted with the problem whether the State should financially support the railway extension, and if so, in what form. Accordingly a Committee was appointed in June, 1842, to examine whether the lines proposed by the Government to be constructed were a real need of the country, whether it was reasonable and necessary that the State should seek to support the construction through guaranteeing interest on the capital, whether this guarantee system, involving as it did the chance of raising the reduced salt tax, would meet with the approval of the country. All the three above propositions were answered in the affirmative. As a result of the recommendations of the above Committee, a Cabinet order was issued in November, 1842, which sanctioned the promotion of the lines connecting the main points with the provinces and the provinces with one another, and permitted the State to encourage the same through the purchase of the shares or by guaranteeing the interest on the capital. At the same time the Treasury was authorised to incur the expenditure to the extent of two million thalers, which it was hoped would be met from the annual revenues of the State. On April 28, 1843, a further order of the Cabinet was issued which enjoined that the available surplus of six million thalers

¹ This was a bank for the purposes of *overseas trade*. It was virtually an enterprise of the State. As such it was only one of the many institutions proper to a State which followed the theories of State commercialism.

² One thaler is equal to three gold marks.

in the Budget should be reserved in order to enable the State to participate in the enterprise by the purchase of the shares of those lines for which it had offered a guarantee, with the ultimate object that the same might be acquired at a future date. Herein may also be traced the first idea of State railways in Prussia.

By virtue of the above orders the State undertook to guarantee the interest on various amounts to different companies. The total amount of capital which it undertook to guarantee at the rate of $3\frac{1}{2}$ per cent. was 31,650,000 thalers. Besides that, it subscribed to one-seventh of the total estimated capital of some lines, and one-fourth of the total capital of others, the total in each case amounting to 4,354,000 and 1,810,000 thalers.

To protect its rights, the State was bound to make some provision in the agreement to guard its interests. The agreements contained the basis for the future transference of the railways to the State. The State pledged itself not to bring its own shares on the market, and to make use of the dividends falling to its share, in the purchase at nominal value of the shares in the market, even when on account of the guarantee liabilities the State may have to make advances, so that every year at least one-seventh of $3\frac{1}{2}$ per cent., that is, $\frac{1}{2}$ per cent. of the share capital, would be thus redeemed. The share of its dividends with the acquisition of more shares will be thus increased, so that in fifty-seven years the whole of the share capital in private hands will be bought out. On the other hand, in cases where the dividends declared rise above 5 per cent., one-third of the surplus will be handed over to the Treasury. Finally, if for five years continuously the State is called upon to make up the interest guaranteed, or if in one year the State guarantee exceeds $1\frac{1}{2}$ per cent. of the total capital, then the State may take the administration and the management of the railways into its own hands until for three years continuously the net revenues exceed $3\frac{1}{2}$ per cent. of the total capital.¹ Besides, the State reserved to itself the right of being represented on the board of directors and

¹ Emile Sax: *Verkehrs-mittel*, Band III, p. 138, 1922.

the right to confirm the appointment of certain officials, the tariffs, and the time-tables, and to use the railways for military purposes.

SECTION III

THE COMMENCEMENT OF A STATE RAILWAY SYSTEM

From the year 1843, the tightness of the money market began to be felt in Germany, and this threw some of the railway companies into great financial embarrassment and prevented them from being able to proceed with the construction of the railways. The State was also obliged to give up all hope of the Eastern Railway (Ostbahn), which it considered so necessary for the public benefit, being constructed by private enterprise. As a matter of fact, for this line, which the State already in 1847 had decided was an important line, no proposals at all for the promotion of a company were made. The above events proved that it was not proper to reckon on purely private enterprise in times of unfavourable financial conditions of the market in cases where it was desired to open up uncultivated parts of the country, as was the case in the east. The full stoppage of all the railway construction also sharpened the difficulties of the industry engaged in the production of railway material. The Government therefore decided to build railways on its own account, if necessary. But once again it found its wings clipped by the law of 1820. The United Landtag, which had been created by Letters Patent in 1847, was asked to sanction a loan for the building of the Eastern Railway. But it declared itself incompetent to do so until it was given control over the Budget and assured the right of being called periodically. As these claims were not granted, the proposal for the loan was rejected by the assembly.¹

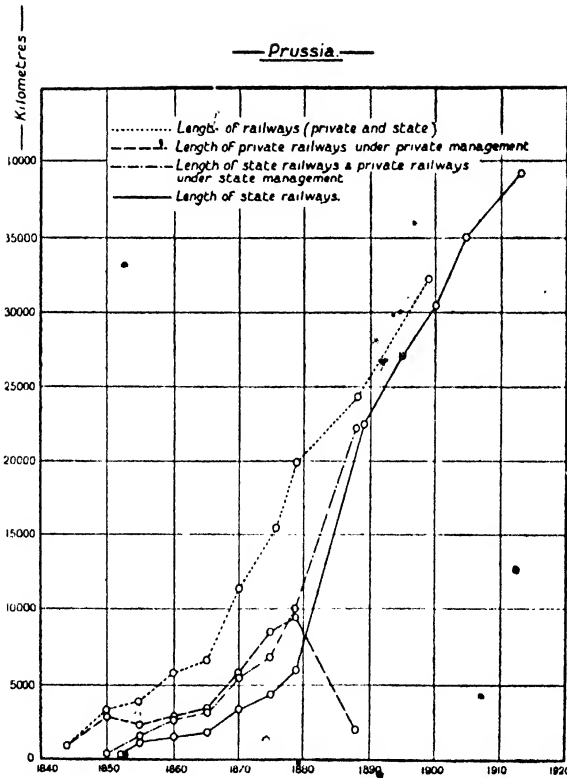
¹ Read the views of Bismarck on the attitude taken by the United Landtag on the question of the loan. In his speech he remarked, "What a sensation it would create when the Government on its side said that we shall withhold our administrative measures of benefit unless the representatives of the provinces agree to vote for certain political questions." It appears to me that the attitude of this House is absolutely analogous to

The year 1848 brought changes in the political constitution of Prussia, which made it possible for the Government to carry the proposal of a loan through the Landtag. An early opportunity was taken to lay before the House the plans for building the Eastern Railway and several other sections. For this purpose, Parliament was asked to sanction 12 millions from the Railway Fund, covering a period of six years, and 21 millions by loan. The proposal was not only agreed to, but a Commission of the Second Chamber expressed itself as of the opinion that the ultimate object should be the transference of all the railway property into the hands of the Government.

Two of the lines which had fallen into difficulties were helped with a guarantee from the State, which at the same time took over the further continuation of the construction of the lines. The administration and the supervision were wholly entrusted to the companies, but the State reserved to itself the right to acquire the lines after six months' notice at nominal value. Besides, the State was to participate in the profits if the dividend was above $3\frac{1}{2}$ per cent., in the following proportion: between $3\frac{1}{2}$ per cent. and 5 per cent., one-quarter; above 5 per cent., one-half.

One may notice here that the idea of the State railways shows itself in a sharper manner than before. Two years later the State acquired the Lower Silesian and Brandenburg Railway, as for two years continuously the State had to make payments to make up the guaranteed interest. As the income improved under Government administration, it took over the railway property by granting an annuity of 4 per cent. to the shareholders. It took over the management of two more lines, one by virtue of the

the above case . . . " A part of the Assembly were only making use of the right of sanctioning a loan, as a weapon to extort greater concessions from the State. Speaking on the usefulness of the line, Bismarck remarked that the opposition against the scheme of the Government divided itself into two parts: (i) those who did not believe in the utility of the undertaking, (ii) and those who did not consider themselves competent to sanction the loan. He would not dilate upon its public advantages; personally he believed in its utility, not only from the material and provincial point of view, but also because of the consolidation which it would bring about in their political and military relations. (Ref. Von der Leyen: *The Railway Policy of Bismarck*, pp. 3-4.)



right vested in the State in case it was called upon for five years continuously to assist in making up the guaranteed amount of interest, and the other because it was requested by the company to take over its administration.

In order to find means necessary for the further acquisition of lines, the Government introduced a tax on the private railways for which the old Act of 1838 had already provided. Its proceeds were to be used in the buying up of the shares of private companies. Article 6 of the law of May 30, 1853, therefore provided that the revenues from the tax must be used in order to redeem the capital invested in the railway enterprise. This may be effected by means of purchasing in the open market the shares of the company concerned. The dividends earned on the shares purchased may also be used for the same purpose. In the following years, the State enlarged its influence by adding to the lines owned or managed by the State. At the close of the year 1857, the length of the Prussian lines was divided in the following manner:¹

State-owned and State-managed.	Privately owned but State-managed.	Privately owned and privately managed.
171,903 miles	163,556 miles	236,625 miles ²

It may be added that the private enterprise which had fallen into the background in the early part of this period began to revive after 1852. New concessions were granted in the following years. The noteworthy feature of these concessions is that they were mostly granted to the existing companies, who enlarged their undertakings by means of priority loans or new shares. This was a happy sign of progress because it ushered in an era of consolidation. Large companies invariably offer greater security for their own prosperity, as well as for the public benefit, than small ones.

The State, however, was not left free from the demands of guarantee. But the guarantees of this latter period were

¹ Minister Heydt was responsible for this extension of the State net. He was a great follower of a State system of railways. See p. 469, *Vorlesungen*, op. cit.

² German long mile, 5.75 English miles. Refer Willick's popular tables.

limited to certain amounts. The total guaranteed capital invested in lines which were not yet acquired by the State amounted in 1857 to 79,150,000 thalers. Of this, 44 millions were guaranteed within the last three years, from 1855 to 1857. But in 1857 the State secured more from the surplus profits than it had to pay in to meet the guaranteed dividends. The total amount of loans incurred by the State for the purpose of railways amounted to 50,300,000 thalers. Besides this amount, a large sum amounting to at least one-fourth of the loan figures was raised from the Railway Fund. The private railway capital invested ran to about 201,750,000 thalers, of which about 110 millions were raised by shares and the rest by priority loans.

SECTION IV—1857-1866.

The period of ten years commencing with 1857 may be characterised as a period of the Manchester School in the history of the railway development in Germany. It is a period when the people were trying to assert their rights and win a constitution for themselves. It is also a period marked by the rapid spread of the theory of *laissez-faire* in economic spheres. Its first influence on the attitude of the Government is reflected in the repeal of the Act of May, 1853, mentioned above. This took place in May, 1859. From this time onwards, the revenues from the railway tax were no longer reserved for the acquisition of the privately-owned capital, but, like other taxes, were to be used for general State purposes.

Although the Government did not cease building the railways, which had already been commenced or for which it had already bound itself, it undertook new responsibilities only under exceptional considerations. Thus, in the year 1862, and in 1865, two new lines were commenced by the State. It is interesting to note how the opinion of the Government and the Landtag were diametrically opposed to each other on the methods of financing the two schemes. The Landtag, which had been greatly imbued with the spirit of the Manchester School, suggested that the shares

which had been acquired by the State, by virtue of the law of 1853, must be sold, and the proceeds thereof be applied to the financing of the two new schemes. The sale of these shares, however, meant a great setback to the principles of nationalisation. The Government, on the other hand, wanted to find the capital by floating a loan as in previous cases.

Another very interesting feature of the period, which may be considered almost as a natural consequence of the belief in the Manchester School which looks upon every Government activity as synonymous with waste and extravagance, is that the Treasury is given a strong influence over the railway administration. Hitherto the Railway Administration had been able to draw upon the Railway Reserve Funds even for extraordinary purposes. Henceforth, the extraordinary needs of the Railway Administration were to be met in the same way as those of other departments. The Treasury was thus given an overwhelming influence on the railway department.

The comparatively slow progress in the construction of railways by the State itself is a natural index to the changed attitude of the Government. The State railways in 1860 had a length of 205 miles; in 1863, 214·87 miles; in 1866, 243 miles. But even this little growth, as pointed out above, is to be attributed to the liabilities arising from old agreements, or from the extension of the old lines. A better standard for the measuring of this slow progress is to be found in the comparative growth of the State and private railways. Whereas in 1854 the railway mileage owned by the State was 141 miles as against 305 miles of private railways, and in 1857 the proportion was 172 : 400, the close of the years 1860, 1863, 1866, saw the following relation between the two :

	1860.	1863.	1866.
State railways :	203·75	213·67	242·6
Private railways :	501·86	568·72	627·17

The relation had thus shifted from 46 : 100 to 38 and 39 : 100, and this was at a time when the times for private enterprise were not favourable and the Government itself

had complained more than once about the want of the readiness of private capital to enter the field.

In this period the concentration of railway enterprise into the hands of a few companies, which was pointed out also in the earlier pages, continued further. This was noticeable not only in the way of the existing companies extending their lines, but also in the amalgamation of separate lines. Out of the thirty-two concessions sanctioned between 1858 and 1866, only four were given to new companies, the rest being given to already existing companies.¹

The State, however, did not abate its activity so far as guarantee of interest was concerned. The total capital which the State had undertaken to guarantee amounted in 1866 to 134,751,980 thalers, 18,000,000 at the rate of 3½ per cent., 65,400,000 at 3½ per cent., and 29,101,980 thalers at 4 per cent., and 22,250,000 thalers at 4½ per cent. As compared to the amount of capital guaranteed until 1857, it had nearly doubled, if notice is taken of the fact that, in the meanwhile, the State had got rid of the liability for about 10,000,000 thalers.

The payments on account of the guarantee liability rose from 3,910,076 thalers in 1860 to 10,767,640 thalers in 1866, so that the years between 1860 and 1866 were responsible for 60 per cent.

Against these payments the State had to counterbalance the income due to the State on account of its share of the surplus dividends for which the guarantee agreements as a rule provided. The sums so received amounted until 1866 to 11,368,949 thalers. The balance in favour of the State amounted in round figures to 600,000 thalers. Still, as compared with 1857, the balance was worse in 1866. Until 1857, the income of the State was higher than its payments, which amounted to 2,848,500 thalers, by 700,000 thalers, i.e., 33 per cent. The income in 1866 was lower by 100,000 thalers and amounted only to 6 per cent. of the payments. The reason for this lay partly in the economic

¹ It is interesting to note that in this period English capitalists began actively to participate in private railway enterprises. The new lines were mostly their creation.

circumstances of the times, but chiefly in the fact that precisely those railways were supported by guarantee of interest which lay in the backward and unopened parts of the country, as for instance in the upper and lower tracts of Pomerania.

The disinclination of the State for a State system of railways may further be traced, in its attempts to make subventions to the lines in the form of *à fonds perdus*.¹ This was done in order to avoid the obligations running for years as in the case of guarantee agreements, and at the same time to make it possible to construct the railways which were considered necessary. At first these subventions were granted by special laws, but later they were contained in the Budget of the year.

SECTION V—1866-1879

This period may be divided into two parts—one preceding the war of 1870 (Franco-Prussian War), and the other following it. In the first period one sees still the continuation of the influences of the theory of *laissez-faire* which had been wafted across from England. But on account of the new political happenings, the net of the State railways, however, continued to be enlarged. The new States of Hanover, Nassau and Hessen, which were now incorporated with Prussia, brought also their railway property along with themselves. Already at the end of 1869 the Prussian State owned 432 miles of railway. But all these additions are not to be taken as interpreting the policy of the time. The predominant note was, still, to leave the field to private enterprise and that the State should only step in where the former was not at hand. Thus, within three years, twenty-three concessions were granted to companies for the construction of 370 miles of railway. The construction of new lines was undertaken by the State itself only when it was obliged to, as, where they were necessary and the

¹ This form of help was not unknown in Prussia. Already, in the case of roads, the districts had adopted this practice of helping their construction.

private enterprise was not forthcoming, or when, as the successor of the rights and the liabilities of the newly acquired States, it had to continue the completion of the lines already commenced or sanctioned.

As regards the lines concessioned to the companies, most of them were without a guarantee. This is easily explainable. Under the influence of more favourable economic conditions, and a greater political settlement, private capital began to gain more confidence. Moreover, the greatest number of these undertakings were in the rich parts, on the western side of the Oder, which on account of the growing economic prosperity and progressive traffic, offered a good prospect for the payments of interest on the invested capital. In case of even the biggest lines on the east of the Oder, however, the State had to offer a guarantee before capital could interest itself, but from the point of view of actual fact, the claims on the State for the guarantee did not exceed to any important extent the claims in the earlier period.

AFTER 1870

The Franco-Prussian War naturally impeded the growth of any new undertakings. War has always proved a stifling force. But the triumphant end of the war brought large means to the disposal of the Government. In 1872, by the law of March 25, 22,750,000 thalers were sanctioned for the construction of new lines, and 4,250,000 thalers for rolling stock.

The year 1873 marks an epoch of considerable importance. A railway mileage of 124·3, estimated to cost 101,920,000 thalers, was sanctioned for construction. The argument for the bill which subsequently became law was founded on the ground that the private companies were threatening the security of the State railways, and that in order to ensure the earnings of the latter it was necessary that the State should be placed in such a position that by possessing or sharing the possession of the main routes of traffic, it should be able to control the railways. The debate on the bill was also made an occasion for grave criticisms against the

system of concessions prevalent in Prussia, and Graf von Itzenplatz came in for a good share of blame. The result of this debate was that the Graf von Itzenplatz had to resign, and a Commission was appointed to investigate the system of railway concessions. The Commission issued a report which discussed all sides of the question. It is an interesting document¹ as not only indicative of the change of attitude which characterised the preceding period, but also as pointing out clearly the defects attaching to the then existing system. But at the same time it emphasised the complexity of the problem, and the difficulty of finding a solution to avoid the defects.

The preliminary question to be decided was whether the construction of the railways was to be the monopoly of the State and all private enterprise be excluded from the field. To this the Commission replied that they were unanimously of opinion that it was an impracticable proposition to depend solely upon the State for the construction of railways. They, however, added :

"The Commission cannot conceal their conviction that with the expansion of the railway net which is still growing and promises still to grow, economic reasons will make it necessary to adopt concentration of railways into the hands of the State as the ultimate goal. By their nature and purpose, railways are like the highways of the country. Only financial reasons have compelled us to depart from that standpoint and to transfer them from the care of the State to private industry and speculation. . . . The Commission consider it therefore desirable that the Government should continuously keep in view the possibility of attainment of that end and from the beginning make such provisions as will prepare and lighten the way."

The whole report is summarised in the concluding pages.² It sets out the evils of the then existing system and then proceeds to suggest remedies for the same. The following are the evils enumerated :

"(1) For want of a fixed plan for the construction of a definite line, there are no guiding principles for allowing or refusing permission to undertake preliminary work.

¹ The printed papers of the Lower House (*Haus der Abgeordneten*, No. 11, Drucksachen No. 11, pp. 189-93. *Abgeordneten Haus Preussen*).

- (2) There is absence of regular rules by which the applicants may be heard, and a decision arrived at.
- (3) Both these defects lead to the results :
 - (a) that the decisions are unavoidably irregular.
 - (b) that the reasons for the divergent or apparently contradictory decisions are not easily ascertainable.
 - (c) that complaints often arise as to the irregularity of the decisions.
- (4) In contradiction to an often repeated principle, the mere permission to undertake the preliminary examination, sometimes the mere discussion of the project, creates a claim to the concession, and shuts out all competition.¹ As a consequence, (a) sometimes the permission to undertake preliminary examination is improperly exploited, (b) the execution of proper lines is endangered.
- (5) The shifting principles regulating the execution of works, mixed enterprises, and the examination of financial methods have resulted in inequalities of decisions in cases which were obviously the same.
- (6) The want of sufficient control over the conditions of concessions, particularly the manner of construction and finance, have led to a serious divergence between the programme of work and its execution :
 - (a) a system has grown up by which the issue of shares below par has become a rule against the express provision of the law.
 - (b) very often it is supposed that this is permitted by the Government.
 - (c) the practice of submitting inaccurate statements of subscription of capital and thus deceiving the public as regards the actual basis and value of the undertaking has assumed abnormal proportions.
 - (d) the construction and financing works are too closely intertwined to the great detriment of the solidity of the undertaking ; secret agreements have become the rule, and the organisers of the society (the general body of shareholders, directors and supervising council—Generalversammlung, Vorstand und Aufsichtsrat) escape the duties imposed on them by law and statute.
 - (e) the railways have been made, contrary to the nature of its undertaking, dependent upon the fluctuations of the Stock Exchange.²

¹ See Appendix A.

² See Appendix B.

- (7) The confidence of the people in the impartiality of the decisions is shaken on account of the fact that the authority for the granting of concessions, and supervision, is vested in the same body which is entrusted with the administration of the railways belonging to the State as 'Fiscus.'"

As the Commission was not prepared to suggest the construction of railways through the agency of the State, it made a few proposals which it was hoped would meet the evils pointed out above.

" Proposals for Reform. I.

- " (1) A scheme of railway net be formed which may, however, be perfected as the times require.
 (2) The cost entailed by the preparation of this scheme may be defrayed by the Treasury.
 (3) Permission may be granted for the preliminary examination of a line even if it be not included in the Governmental scheme. The granting of this permission may be made dependent upon :
 (a) depositing caution money for the security of the landed interests which are affected by it.
 (b) making it obligatory upon the petitioner to transfer the results of his examination to the Government.
 (4) The preliminary works prepared by the State should be accessible to the public.
 (5) No claim to the concession be recognised simply on account of the preliminary examination of a line.¹

II.

* * * * *

III.

- (1) The concession is to be granted by the Government, which must beforehand :
 (a) give notice of the application to the Empire (Rekh);
 (b) publish the same;
 (c) invite the opinions of the districts and provinces and of representative bodies;

¹ This was in order to avoid the abuse of trading in mere permissions to undertake preliminary examinations connected with an undertaking.

- (d) put all the material before an administrative organ constituted for the purpose.¹
- (2) Applications for concessions must be supported by:
- (a) a statement of the suitable preliminary examinations.
 - (b) a general explanation of the intended methods of the manner of financing, with a further proviso that the method of financing actually adopted will be reported within a certain period after the granting of the concession.
 - (c) by an offer to deposit money as a guarantee of the fulfilment of its promise.
- (3) * * * *
- (4) * * * *
- (5) * * * *

IV.

- (1) The registration of a railway company must take place only after it has been proved that the estimated capital for the construction of a line has been fully subscribed.
- (2) The needed capital must be paid in, in cash, to the treasury of the company.
- (3) Capital may be created by shares sold below par if the following conditions were observed:
 - (a) shares of the same value, of the same company, and subject to the same conditions, must be issued at the same price.
 - (b) the rate at which they are issued must be shown in the prospectus issued by the company, and must be written on the subscription form and upon the share certificate itself.
- (4) The stipulation that the shares may not be allotted until a certain percentage is paid is to be retained. In the calculation of this amount, in the case of a share issued below par, it is not the nominal amount on which the percentage is to be calculated, but the amount at which it is issued.
- (5) Interests arising during the period of construction may be allowed, but the time and the amount may be limited.
- (6) * * *

¹ This tribunal was to have only a consultative voice for the avowed reason that there may be considerations which could not be within its cognition and which may be still of great importance—for instance, political ones. The opinions of the tribunal, however, could not be without a considerable moral value in the decisions of the Government.

- (7) No share may be issued unless the full amount of the issue price is paid in.
- (8) The relations of a promoter to a company may be given a legal definition which may be guided by the following considerations :
 - (a) the promoters may conclude all agreements relating to financing a scheme.
 - (b) a definite contract for construction can only be made by the company to be constituted.
 - (c) all the costs arising from financing the enterprise or other extraordinary charges, and particularly those which fall to the promoters, or are on account of the participation of the enterpriser for construction, in finding capital, must be clearly shown.
- (9) Financing and construction are to be kept apart. So far as construction is not undertaken against payment in cash, the system of mixed enterprise may not be disallowed."

The further recommendations of the Commission relate more to the general province of regulating the proceedings of limited companies than to the railway companies alone. Many of the evils were doubtless due to manipulations in the proceedings of the companies.

Particular mention may be made of the practice of evading the familiar rule of a voter having not more than a maximum number of votes. This was done by transferring a share to an individual only for the purpose of one general meeting with an agreement to retransfer the same afterwards. As against this, it was provided that such evasion will be subject to punishment. All violations of the law were to be treated as crimes, and the promoters, directors and supervisors,¹ whoever were in fault, were to be made responsible. The company may appoint auditors who were not at all connected with the administration of the concern. The rights of shareholders were enlarged with regard to bringing the culprit to justice. A shareholder could, in case of a violation, insist on his rights even after

¹ On the Continent, besides the general body of shareholders and the Board of Directors, there is a third supervising body chosen from amongst the shareholders.

a formal discharge was given by the company and move a judge to appoint special auditors.

In case of a manipulated majority the minority could appeal to the court for protection.

Briefly, the recommendations of the Commission may be summed up into (i) formation of a plan of railways; (ii) the administration of the concession through the executive assisted by an expert body; (iii) publication of the proceedings and accounts of railway companies.

It was further recommended that the rôle of the State may be extended usefully to aid in the construction of local lines by means of subvention. The necessity for this was emphasised on the ground that only by means of such lines "distant parts of the country would be opened up and the disadvantages removed which the through lines entail upon those parts of the country which are, yet, not sufficiently within easy reach of them."

Dr. Emile Sax, the famous railway economist of Germany, criticises the report as one which failed to grasp the kernel of the situation. In his opinion, the evils were due to the fact that most of the undertakings could not subsist as independent concerns. Their existence was further endangered by a general crisis in the country.¹

The lively interest in railway enterprise which, as we saw, set in, in the sixties of the last century, deepened a year before the outbreak of the war. The war gave it a setback, and the triumph of the German arms revived that interest. Speculation was at its height in the country. This was followed by a natural depression, which was but precipitated by the disclosures of the Commission of the evils in the methods of promoting companies. This depression was reflected in the decline in the number of proposals for concessions. Not only did this number decrease, but the periods within which the already sanctioned schemes had to be built were extended. Both the sound and unsound schemes were hit by the crisis. The lack of confidence of capital was general, affecting the whole railway industry. In these difficult times, the State had to step into the breach.

¹ See p. 471, *Die Verkehrsmittel in Volks- und Staatswirtschaft*, Vol. III.

It was evidently its duty to complete and construct those lines which were not in the interests of capital merely, but were required by public needs. By the law of 1874, a loan of 151,800,000 M. was raised to build various small lines. In 1875, Pommern Central (151 km.) and Berlin Northern (222.5) railways were acquired and completed, as both of them had fallen into financial difficulties, and Parliament refused to guarantee the interest on capital required to be raised. The State, however, in the case of other lines, did not refuse its help, either in the shape of subscription to shares or a guarantee for the capital raised.

From the years 1870-5, the claims on the Government for a guarantee rose successively as follows: 1,743,145; 2,224,061; 4,238,993; 6,177,049; 6,152,010; 4,445,120. But the amounts handed over on account of the participation of the State in the surplus profits were as follows: 6,143,702; 6,155,376; 6,182,865; 4,912,565; 4,431,121, and 3,985,215. The total of the latter sums exceeded the total of the former by 6,785,509, so that even in the years of crisis, the State was not out of pocket.

SECTION VI

THE PERIOD IMMEDIATELY PRECEDING AND FOLLOWING THE ADOPTION OF THE POLICY OF NATIONALISATION

The effects of the crisis still lingered behind. In the years 1876, 1877, 1878, the concessions granted were 2, 5 and 5 respectively, and these only for small stretches of lines. The petitions to have the periods of concession extended were still numerous. Some of the companies went into voluntary liquidation without having commenced at all. These financial troubles and the irregularities of railway tariffs and timetables, which were seriously examined by a tariff commission, aroused the public to action. Bismarck, who was in power, made up his mind that the only cure for the abuses was to nationalise the railways.¹ But the question which then arose was whether the railways

¹ See Appendix C.

should be taken over by the Prussian Government or be handed over to the Empire. But owing to the particularist tendencies of the different German states the latter proposal failed.¹ Prussia then started out to nationalise its railways.

At the same time that the transfer of the railways to the Empire was being discussed, the Prussian Government was extending its net by acquiring more lines. The chief amongst the acquisitions were the Halle-Cassel and Nordhausen Nüxe—the latter against book valuation, and the former against an agreed sum. The total length of both was 246 km. Some lines were guaranteed interest of 4½ per cent. against preference loans, in consideration of which they agreed to give a right to the State to acquire the lines after fifteen years. An important line in Lower Pomerania was also taken over for management by the State, in virtue of the right vested in it, in case the State was called upon to make contributions up to a certain limit.

Fifty per cent. of the railway net at the beginning of 1878 was still in the hands of private companies; 30 per cent. belonged to the State, and was also managed, along with the other 20 per cent. owned by private companies, by the direct State agency. The most important swing in the direction of nationalisation came in the year 1879 when Maybach took charge of the portfolio for Commerce. He had been an avowed supporter of the nationalisation policy before he entered this office. In the autumn of 1879 a bill was presented to the Prussian Landtag for the acquisition of 3,382.33 km. of private railways in working order, and 161.91 km. of uncompleted ones. The law received the sanction of the monarch in 1880. The argument to this bill,² which forms an important milestone in the history of the nationalisation of Prussian railways, helps to give us a fair survey of the motives which led to this step. It makes out as strong a case for nationalisation as has ever been put forth. It starts by emphasising the peculiar conditions of Germany where the low capacity of

¹ See Appendix D.

² Drucksachen No. 5, *Haus der Abgeordneten*, 1879.

individuals, and its geographical position as an island state, marked out the railways as a proper sphere for the State. Then the legal restrictions which prevented the State from assuming its rôle are referred to, and the then prevalent mixed system is justified only as a creation of necessity in the past. The main argument which runs throughout the bill is that the whole history of the railways in the past has brought home to the Government that the needs of the railway industry and the traffic served by it require in an increasingly urgent manner the concentration of property, management and administration of all the railways in one hand.¹ The advantages of the unity of administration are detailed at great length in the second section of the argument. This section is subdivided into two sub-sections relating to: (i) construction; (ii) management.² The reasons adduced in favour of the first, viz., unity of development, may be usefully reproduced here *in extenso*.*

The question is dealt with from the view-point of conserving the capital resources of the nation as a whole.

"As the net of the main railways of the country must be looked upon as definite and settled, every capital outlay which has been made upon dispensable lines may be regarded as lost. The matter may still be aggravated by further waste of capital upon new competitive lines. Although it is not possible to estimate the loss of capital due to construction of lines which could have been dispensed with, still it may be said that it is not a negligible one. Many extensive lines, and numerous big structures (stations, bridges, etc.) have been undertaken at a cost of hundreds of millions of marks, only to secure to a railway an independent development, and make competition, or to prevent prospective competition. Although not all these may be considered as unproductive expenses, yet they contain a large element of waste of national capital, because the amount of money so used up is withdrawn from other more profitable and

¹ Dr. No. 5, p. 39.

² The disadvantages, from the point of view of management of railways as so many separate systems, are viewed from the point of view of the number of directors and officials, tariffs, time-tables, refunds, transfer stations, inadequate use of wagons, duplicate services, inadequate use of lines resulting from agreement to give alternate services instead of running all the competing lines, detours of traffic, and the consequent increase of costs and transport price.

necessary undertakings. (The point has never been considered from this same angle of vision in England. One of the reasons, evidently, is that England was rich, and its capital was employed to a large extent in foreign lands. England had not the same necessity of conserving its capital resources as Germany had.)

"The disadvantages of competitive methods of constructions are not exhausted with the loss of capital directly invested. The over-precipitated competition of different railway undertakings has led to general over-production, from the losses of which our whole economic life has not yet recovered. Innumerable industries are dependent upon the railway industry, so that an over-production in the latter reacts upon the others. No proper basis is at hand for judging the development of the railways, and all the industries which serve them have been misled to increase and extend their equipment beyond the actual needs. It is not unreasonable, therefore, to throw an important share of blame for the present economic calamities upon the competitive methods of construction. This calamity would have had even graver effects upon industry were it not that the State stepped in the breach, and through its vast extensions of State railways, supplied new nourishment to the severely hit industries."

The argument goes further to dispose of the assumption that the disadvantages of competitive methods of construction will not come into question in future. It is pointed out that even if the main arteries of railways exist, yet the task of new construction is not at an end. With the completion of the main lines commences a new task to turn to best account the lines already opened. For this purpose, all the sources on both sides of the line must be tapped by extending facilities of transport to them. . . . With the growing traffic, new stations have to be put up, new tracks to be laid, and structures to be altered and extended, secondary lines to be installed in adjacent districts, in order that the agricultural products may obtain the necessary market--in short, all the numerous installations to be established which go to energeise local traffic and increase the utility of the main line. • These naturally make large demands upon capital.

"It is easy to realise to what extent it is possible still to squander money in undertakings guided by merely competitive interests, as in the rich districts of Upper Silesia and the Rhenish Westphalian provinces. The closer the main competitive lines lie

to each other, the greater is the number of crossings and junction points, the thicker and the more entangled the net of railway branches, the greater is the cost of new extensions. The cost of the acquisition of land rises disproportionately, and the demands of safety make increasing claims on new expenditure. . . . There can be no doubt that the needs of traffic could have been served by only a fraction of the actual expenses, if in place of competitive construction by opposing interests, a regular and systematic plan for it had been substituted."

Once it is settled that the unity of construction and management is advisable in the interests of economy, it is clear that the public require an increasing measure of protection against a monopoly industry entrusted with the supply of such a public utility service as railway transport. The argument considers four alternatives to achieving the twofold object: (i) unity of management; (ii) prevention of monopoly abuses.

1. Private railways with private management.
2. Private railways and State management.
3. State railways and private management.
4. State railways and State management.

After considering the relative merits of the above alternatives, the argument lays down that

"only a combination of property and management rights in the hands of the State offers a guarantee for the fulfilment of the duties which are owed by the State for the development of inland traffic. Only by this system can the economic benefits of unity of management be fully realised without giving rise to new dangers of monopoly."¹

"On the other hand, a more rational standard for gauging the financial reasonableness of an administrative measure is to be found in the collectivity of railways as a whole, than in small disconnected administrations."

The truth of the arguments in favour of greater unity and concentration of management on the one hand, and an increased, almost tightening Governmental control on the other, in the railway industry, is amply borne out by experience. Countries like England and the United States, which are the homes of private enterprise, have been led by force of circumstances to greater amalgamation and

¹ See Appendix E.

stricter control. Whether the problem will be ultimately solved in this manner in these countries or whether they will still learn by experience that control cannot be effective without the ownership of the property controlled, the future alone will show.

SECTION VII

SECONDARY LINES OF RAILWAY

The period following the first big step in 1879, of the acquisition of railways by the State, is mainly crowded with events of further acquisition. In 1880-81, 5,001 km.; 1882-83, 2,424 km.; 1883-84, 931 km.; 1884-85, 3,394 km.; 1885-86, 1,108 km.; and in 1887-88, 525 km. were acquired by the State.¹ But these years were still not lacking in State activity in the direction of new construction. But this latter took the shape of local railways (Nebenbahnen) rather than main lines. The main arteries of railways were almost completed in Prussia.

By the law of March 9, 1880, the Government decided to encourage the extension of certain secondary lines. The argument² to this law explains the obligations of the State to support the construction of local lines (Nebenbahnen or Secundärbahnen), and lays down general principles for aiding the same. According to the argument, the important economic advantages which the possibility of quick and cheap transport offers to towns connected with railways are partly set off by disadvantages to other cities which lack the same transport facilities. The latter are not only incapacitated from competing with their erstwhile rivals, but are faced with new competitors from distant areas.

"Even agricultural and forest products cannot dispense with connections with the main lines if they are to realise their full value. A further enlargement of the main lines by means of branch lines will be therefore felt as an urgent necessity in all parts of the country."³

¹ Anlage XLIV, *Der Staatshaushalt*, p. 128.

² Drucksachen No. 6, 1879-80. *Haus der Abgeordneten*. It is an important document indicating the policy of the Prussian Government toward aiding secondary lines.

³ Drucksachen No. 6, p. 260.

The scope for the development of traffic on these lines is naturally limited, and private capital could not be reasonably expected to enter the field without some prospect of a reasonable return. Instead, there was both a direct and an indirect interest on the part of the landholders, industrialists, and the districts concerned, in their development. The State as the owner of the main lines is also naturally interested in them, as feeding the former. Besides this direct fiscal interest, the State is under an obligation to improve the general welfare and the consequent taxable capacity of the population, and give every part of the country facilities for traffic.

"There may be also considerations political or military—as in the case of lines which serve to bind the different isolated parts of the Empire and those required for purposes of defence—which may call forth State participation in the extension of local lines."

The argument then goes on to discuss the form in which this encouragement may take place. The regulation of this form by means of a law is set aside as inadvisable.

"In the present stage of the development of the secondary railways, it is inopportune to regulate the matter (form of State help) by law. . . .

" . . . The branch and local lines vary so much according to their length and local position, their technical equipment, as also the nature of their traffic which they are intended to serve, that a definite conception of these is not at hand. . . .

" . . . The framing of the law which will answer the needs¹ and circumstances of such different kinds of installations is hemmed in by all sorts of difficulties.

" . . . There is therefore a danger that if by law definite rules were laid down, there would be too rigid an adherence to mere pattern, which would make it impossible to consider each varying case in a suitable manner."

Co-operation and encouragement of the Government could take two shapes: (i) easier conditions than those which are imposed upon the main lines in regard to both construction and management; (ii) active participation of the State in their construction. The latter problem is

¹ P. 261, column 2.

discussed at length. The main guiding principle laid down is

"that the degree and extent of participation which will be claimed in each individual case will vary according to the economic importance of the line serving the district, the amount of the cost of construction, and the capacity of the parties interested in it.

"The participation of the State cannot be equal in all cases; it will be measured rather by its direct fiscal interests in the development of the branch line, and the degree of its importance as one needed for general common good, or otherwise. Lines which are predominantly military in their purpose, and such other side lines which open up rich and fruitful areas and increase the profitableness of the existing State lines, will be justified in their claims for greater aid than those which are primarily in the interests of certain urban or rural communities, or, still less, only in the interests of individual industrialists or landlords."

There are two main ways in which this encouragement may be given to railways of local importance: (i) construction by the State with aid from the people or districts benefiting by them; (ii) financial participation by the State in construction of lines by some other party.

As for the first, the first condition on which the State offered to undertake the construction of a local line was to be that the land needed for the purpose shall be supplied free of charge by the districts or the people interested. This condition was found to be essential in the interests of economy in acquiring the necessary land. It was apprehended that if the price was to be paid by the State, the values of the lands needed would go up abnormally high, because, as it will not be difficult to guess the direction of the side lines, prices will be forced up by speculation. If, on the other hand, the interested parties have to supply their land free, it would be in their interests to keep down the same. Exception to the above rule may, however, be made, if the cost of acquisition in certain cases was either too high or too low. In the former case, the State would partly relieve them by granting them a corresponding indemnity per km. In the latter, the State would require them to advance a sum with no interest to be paid. For calculating this amount, not only the capacity of the inter-

ested groups and the amount of benefit accruing to them, but also the cost to which the State is liable for its construction, would be taken into consideration.

The participation of the State in the case of those lines which may be constructed by a third party or the interested groups themselves may take place in different forms; subscription to share capital—advance of a loan on easy terms—subventions *à fonds perdu*—guarantee in whatever shape—taking over the administration of the line—permission to use certain State railway installations or plant—assignments of materials or land.

Of all these forms only two are expounded at some length: (1) Participation in the share capital; (2) the leasing of the line to the State.

At the very outset it was again laid down that it would be inadvisable to regulate the forms by law. The prerequisites of this help are: (i) that the land needed for the purposes of the line will be granted either free of charge or against a reduced price which will be assessed by the Minister of Public Works; (ii) that the provinces, the districts, or the parishes traversed by the line participate in the subscription of the capital, in which the cost of acquisition of the land is not to be included.

The State may not subscribe to more than three-quarters of this capital, and this may not exceed the rate of 15,000 M. per km., and within these limits may not be above the figure subscribed by the provinces, districts or parishes concerned.

The lease of the line may be taken over only when (i) the local railway directly joins a State railway, (ii) the local railway is so built and equipped that the wagons of the main line can be used on the former, (iii) the districts concerned subscribe to at least one-sixth of the total outlay capital and renounce their claim to interest above 2 per cent. until the rest of the capital is able to obtain 4 per cent.

Within the seven years following this Act, 3,870 km. (of Nebenbahnen) as compared only to 118 km. main lines were built by the State. Hardly any local lines worth

mentioning were built by private companies, aided or otherwise, probably because the State was too active in the field, and preferred to monopolise it.

That the activity of the State in the direction of extension of the railway net did not abate in spite of its preoccupation with nationalisation, is very singular. The amounts sanctioned within these years for the purposes of extension alone amounted to 314,311,500 M. With the nationalisation of the railways disappeared to a great extent also the system of lease of private railways to the State.

SECTION VIII

LIGHT RAILWAYS

After the great achievements of the preceding period the scope of the activity of the State in the field of nationalisation was comparatively trifling. But, nevertheless, it had sufficient to do in the way of further development of the net. Within the period of thirteen years following 1887 the State built 4,506 km. of Nebenbahnen, 305 km. of main railways, for which by respective laws a total of 502,768,000 M. were sanctioned.¹ The field of private enterprise was naturally very much narrowed in this respect.

A new field of activity was opened to private capital by the Act of Light Railways, 1892 (*Kleinbahngesetz* von Juli, 1892). The "Kleinbahnen" there are defined as "those which serve the traffic of a local area or which are not driven by locomotives."² The purpose of this Act was to free the State from the costly extensions of main and side railways. Simplicity and cheapness of construction and management and adaptability to the local needs of traffic were the motive powers of the Act. The execution of the light railways by the existing State agency which built the main and side railways would not have been advisable. It may be guessed that the officials would have found it hard to free themselves from the high

¹ The total is made up from the different figures supplied by Strutz in *Der Staatshaushalt*, p. 647.

² *Jahrbuch des deutschen Verkehrswesen*, Bd. I, p. 266, 1922.

standards of construction employed on the main lines. To find a different agency was therefore absolutely necessary. This agency was found in a combination of the State, the provinces, the district groups of directly interested people,¹ and others disposed to participate. Capital was to be found by all the parties together. In this way 10,000 km. of light railways were built in twenty years, almost one quarter of the main and side lines together. Of the total outlay capital of 850 million marks, approximately 200 were subscribed by the State, 100 by the provinces, almost an equal sum by the interested groups, 180 by the districts, and the rest by the general investors.² The State subscribed the 200 million marks, not all as share capital, but some of it as loans upon a low rate of interest.

The distribution of the mileage and the number of miles in different provinces is very instructive. The tables we reproduce below are of the year 1900, when the total number of light railways had attained a figure of 7,267 km. The net has been wisely spread out both in agricultural and industrial areas.

¹ Under this may be understood the owners of agricultural land, forests and other adjacent interests, the forests being mostly Government property, also subscribed from their departmental treasury.

² The nature of the participation in the property of the undertaking was naturally reflected in the organisation of its management. But here, as in the management of main lines, it was found economical to make compact groups of several undertakings together for the purposes of management. Generally these groups are formed as covering all the undertakings within a district or a province, or sometimes even stretching over the different states. These groups are also formed as limited companies, in which an important element of shareholders is constituted by the State, the provinces, the districts and the parishes. The chief idea underlying the whole scheme of group management is that local administration should be conducted in as simple a manner as possible, and that the general tasks common to all the parties of the group should be assigned to a central organ. As a rule, the latter has the charge of all directing work, the framing of a Budget, the time-tables, tariff, control of money and accounts, the workshops, and the supply of material for construction and running of the line. As an instance of the group organisation may be quoted Hanover, where thirty-five different undertakings are embraced in one group. It is also noteworthy that in this province one notices already a tendency to the repetition of the same phenomenon which was achieved by the State during the years after 1879. In 1921 the provincial Landtag authorised the light railway department, better known as the *Landeskleinbahnamt*, to conduct the work of construction and management of light railways on its own account. If things move far in this direction there will doubtless follow what we may call "provincialisation" of the light railways (*Jahrbuch des deutschen Verkehrsweesen*, 1922, Bd. I, pp. 266-70).

PRUSSIA

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	Number.	Total Length.
East Prussia	10	359
West Prussia	9	212
Pomerania	25	1,232
Posen	12	470
Silesia	22	544
Berlin	9	368
Brandenburg	36	650
Saxony	33	609
Schleswig-Holstein	20	392
Hanover	20	573
Westphalia	24	370
Hessen Nassau	26	320
Rhineland	73	1,127
Hohenzollern	1	38

These lines serve the following different kinds of traffic :

	Passenger Traffic.	Mainly Commerce and Industry.	Agriculture.	The last two equally.
East Prussia	3	1	5	1
West Prussia	5	1	2	1
Pomerania	2	1	20	3
Posen	2	1	10	3
Silesia	6	9	14	1
Berlin	9	9	14	1
Brandenburg	10	9	12	5
Saxony	12	5	13	2
Schleswig-Holstein	7	5	5	
Hanover	2	2	12	1
Westphalia	13	4	3	4
Hessen Nassau	7	5	2	5
Rhineland	28	35	1	6
Hohenzollern	28	1	1	6

SECTION IX

CONCLUSION

The railway net in 1899 attained a total length of 32,219 km., of which 3,000 km. were in private hands and the balance was Government property. Of the 3,000 km. owned by private capital, two-thirds were secondary lines (Nebenbahnen) and one-third main lines. The development of State railways in Prussia (including the Hessischen stretches) may be seen from the following table.¹

¹ Table taken from *Archiv für Eisenbahnwesen*, 1924, p. 723.

Year.	Length.
1895	27,020
1900	30,579
1905	34,549
1910	37,589
1913	39,279

The chief achievement of the State is not so much in the regular extension of the railway net as in its distribution.

It has been an outstanding complaint of the German economists that in the days of private enterprise in Prussia, whereas there was a plethora of railways in the rich parts of Prussia, the eastern parts were sorely neglected. It is argued that such a state of affairs only increased the disparities between the different parts of the country. It was only when the State stepped in that, not only was the balance restored, but the natural inequalities diminished. The truth of this complaint may be proved from a survey of the railway mileage in the different provinces of Prussia before the nationalisation of the railways in Prussia and after it.

This is admirably summed up in Appendix XLV to *Der Haushalt und die Finanzen Preussens*, which is reproduced here as Appendix F. Whereas in 1878-79 the eastern and western parts of Prussia together showed a mileage of 1,190 km. of State railways as against 500 km. of private railways, in 1899 they were in possession of 3,230 km. of State railways as against 440 km. of private railways, the latter being diminished by 60 km. owing to nationalisation. In Pomerania and Posen, the effects were still more in evidence. In the former, the State railways rose from about 400 km. to about 1,525 km., whereas private railways went down from 690 km. to about 290 km.; in the latter, even omitting the mileage added by acquisition of private railways, the State railways rose from 290 km. to 1,250 km. Contrary to this, in the province of Rhineland, the railway mileage of the State in 1879 was about 270 km. as against 2,150 km. of private railways; in 1899 the latter went down to 136 km., the former having increased only to 3,500 km. The mileage extended by new construction was hardly 1,250 km. In Westphalia, Saxony, Silesia, Hanover, Schleswig-Holstein, Hessen Nassau and Brandenburg (including Berlin) the mileage added (not taking

into account the mileage nationalised) was only 800, 950, 1,300, 900, 530, 700 and 1,300 respectively.

For every 100 sq. km. and every 10,000 inhabitants, the State and private railways together (exclusive of light railways), even so late as 1883-4, amounted to :

	Km.	Km.	Km.	Km.
E. Prussia . .	3.02 and	5.76 as against	5.75 and	10.46 in 1898-9.
W. Prussia . .	6.28	7.15	6.04	9.97
Pomerania . .	4.34	8.66	8.65	7.17
Posen . . .	3.95	6.81	7.14	10.94
Silesia . . .	6.86	6.89	10.08	8.95
Saxony . . .	7.86	8.41	10.96	9.94
Schleswig-Holstein . .	5.10	8.58	7.63	10.81
Hanover . . .	5.41	9.75	6.73	10.27
Westphalia . .	9.95	9.03	12.35	8.68
Hessen Nassau	7.98	7.97	10.77	9.27
Rhineland . .	10.48	6.77	13.98	7.03

The distribution of the railways (including light railways) in the various provinces in 1919 is shown in the following table : ¹

	1.	2.	3.	Total.	4.	5.
E. Prussia . .	947	2,992	48	3,989	19.12	10.78
W. Prussia . .	606	2,392		2,998	17.22	11.73
Pomerania . .	1,682	2,260	84	4,030	23.40	13.39
Posen . . .	848	2,803	52	3,704	17.18	12.78
Silesia . . .	858	4,817	163	5,839	10.87	14.48
Schleswig-Holstein	971	1,343	279	2,594	15.47	13.64
Hanover . . .	1,103	2,966	387	4,458	14.71	11.58
Westphalia . .	490	3,034	456	3,981	14.71	19.69
Hessen Nassau . .	364	2,220	46	2,630	9.11	16.75
Rhineland . .	872	4,609	391	5,874	11.47	21.76
Brandenburg . .	1,095	3,633	687	5,415	8.41	13.57
Hohenzollern . .	92		90	183		16.04
Saxony . . .	952	2,826	285	4,064	12.96	16.49
Total . . .	10,880	35,904	2,970	49,770	11.98	14.27

Explanation :

- Col. 1. Light railways in Prussia. •
2. State railways.
3. Private and other states' railways.
4. Per 10,000 inhabitants.
5. Per 100 sq. km.

¹ Taken from Appendix IV to *Reichseisenbahnen*, by Dr. Quaatz (1919), reproduced from the semi-official *Zeitschrift für Kleinbahnen*, Part 3, March 1919.

Disparities which existed still in 1883-84, when on 100 sq. km. in Eastern Prussia only 3.02, whereas in Rhineland 10.48 km. of railways existed, have been materially reduced. In 1900 the greatest difference was 5.75 as against 13.98. If both the industrial provinces of Rhineland and Westphalia are excluded, the result appears still better—the greatest difference being between 5.75 and 10.77.

Although these inequalities have been remedied, yet a sense of proportion of the varying needs of the different provinces has never been lost sight of. This may be realised if a glance is thrown on the figures showing the relative mileage of main and side lines in different provinces. The figures quoted below are of the year 1899. In Eastern Prussia and Pomerania the Nebenbahnen preponderated over the main lines (1,260 against 867 and 1,080 : 735). In Western Prussia and Posen the scales were even, 740 : 800 and 1,050 : 1,015 respectively. In all the other provinces the scales were turned down by the main lines: Brandenburg, 2,420 : 1,030; Silesia, 2,630 : 1,430; Saxony, 1,875 : 890; Schleswig-Holstein, 840 : 610; Hanover, 1,820 : 770; Westphalia, 1,860 : 700; Hessen Nassau, 1,110 : 5,801; and Rhineland, 2,400 : 1,370.

The new construction of the railways by the State in the years following the passing of the Act for the Nebenbahnen has been preponderatingly in the direction of the latter. In 1880, compared to the total State mileage, the main railway length was 88.62 per cent. This proportion shifted gradually in the following years from 88.62 to 65.97 in 1899. In 1913,¹ of the total length of 39,905, 17,294 miles were Nebenbahnen, i.e. the proportion had still further shifted to 63. After the Peace Treaty of Versailles, the Prussian and Hessischen railway system has been diminished by 4,115 miles, having to hand over this mileage to Poland, Belgium, Czecho-Slovakia, the Free Town of Danzig, and the Memel district.

¹ The figures are taken from *Archiv für Eisenbahnwesen*, 1922, pp. 723 and 698.

APPENDIX A

IN enlargement of the four evils above enumerated, something more may be said. The law of 1838 which has been mentioned on page 47 of this thesis had laid down that at the time of petitioning for the grant of the concession, certain information must be laid before the Minister of Commerce.

It was presumed that before one started to gather this preliminary information, permission would be asked for from the Minister. But sometimes this preliminary information was laid together with the petition for the concession. The decision was generally arrived at by the Minister of Commerce alone except for a reference to the War Minister. The refusal or the granting of this permission was guided by no scheme, but was influenced by the individual circumstances of the case, without any regard to a scheme of railways. Even if there were no unjustifiable preference of individuals, yet by this irregular procedure this belief gained ground. The lack of an objective basis on a norm was responsible both for the irregularity of the decisions of the Government and for the uncertainty in the public mind as to whether the scheme would be approved or not. It is interesting to note that at the time of asking for the permission to make preliminary enquiries, the petitioner had also to prove the profitableness of the undertaking. This scheme may have been called for by the necessity of conserving the resources of the country. But at that stage of the railways it was difficult to decide upon the question of profitableness. Experience has taught that sometimes the success lags behind all expectations, and sometimes exceeds them, and that circumstances often arise which are difficult to anticipate. For this reason, it was recommended to do away with this stipulation.

As for the suggestion for a scheme of railways, it may be further noted that it was not meant that it should be rigid. The changes in traffic conditions could not be provided for in advance. It was therefore added that it would be the continuous task of the administration to keep themselves informed of these changes, and to make the necessary alterations in the plan. These corrections do not destroy, however, the usefulness of a plan in the development of railways. The Commission met the other objection that the State lacked the technical means for the preparation of the scheme, by the answer that the State could employ the same agency which was at the disposal of the companies.

The consequence of treating the mere permission to undertake preliminary examinations of a line, as equivalent to a privilege of preference for the construction of that line, was that some people misused that right by trading on it. They had no inten-

tion of carrying a scheme through, but merely to speculate upon the profit which could be made by the sale of this permission.

NOTE.—In this connection, it may be further added that, after carefully examining the important question as to whether the concessions may be granted by a law or an executive action, the Commission expressed itself for the latter procedure on the ground that, in this way, the dangers of legislative delays could be avoided, and the decisions removed from the influences of conflicting individual interests. The legislature, it was argued, would have sufficient opportunity of guarding the public interests at the time of the formation of a general scheme of railways, and at the time of sanctioning the money bill for the preparation of the same. (See pp. 156-62, Drucksachen No. 11, *Abgeordneten Hause*.)

APPENDIX B.

The evils numbered as 6 and 7 may be treated together: those arising on account of lax or improper control before the formation of a railway company, and those arising after it. It has already been remarked that with the petition for a concession, the applicant had to furnish proof as to how the money was to be raised. This stipulation was found by the Commission to be restrictive in its action. All the experts said in their evidence that capital shirks any such obligation and is at home only when there are more favourable stipulations, and greater scope of movement. It was therefore recommended that at that stage it was sufficient to receive a general indication of the methods proposed for financing a project, and that definite information may be required within a certain period after the granting of the concession. A certain sum may be taken from the concessionary as caution money, which is to be set free as soon as the requisite proof is furnished. It is noteworthy that one of the members wanted to go even further than that, and make the whole question of financing independent of all control of the State.

The discussion of the problem of financing the railways is preceded in the report by a few observations on the law of June 11, 1870, regulating the limited liability companies. The latter had expunged the right of the State to satisfy itself on the financial solidity of a limited liability concern before recognising it. This was on the ground that on account of the growing complexity of the methods of finance their examination by the Government had often proved insufficient and unreliable, and gave a false sense of security to the public as to the soundness of the concern.

The recommendation of the Commission that the proof of the

methods of financing the schemes should be deferred until a certain period after the granting of the concession, was obviously not in agreement with the law of 1870. It was argued that the railways offered an exceptional case. A completed line is a great benefit and a boon, and an uncompleted one, on the other hand, is injurious not only to those interested in the concern, but also to the public at large, on account of the local inconveniences and obstacles which are bound up with it. A few of the members insisted that after laying down the direction of the line and the kind of work to be executed, the State supervision should limit its activities to merely seeing that the police safety regulations are observed and the needs of traffic satisfied. This could be secured by a demand for "construction caution money" which may be forfeited if there was failure to meet the above requirements. This view was supported on the ground that State control of finances was impracticable and purposeless. The State lacked the executive machinery for the purpose because a mere supervisory body could easily be misled. If the control be inefficient, it would lull the public into sleep and make them less vigilant. The majority, however, did not share this view. The "construction caution money" was deemed an insufficient compensation for the losses arising from the failure to execute the work. It is often impossible for the executive to remedy the damages already inflicted. The possibility of deception was considered to be not a sufficient reason for dropping altogether the control needed for the public benefit.

The manner of control of finances was regulated by the law of 1838, and was not touched by the law of 1870. It laid down that the full subscription of the needed capital must be proved, and 10 per cent. of the nominal value of the shares be paid in. Control over the real sums paid in, and the ultimate payment in full of the shares, was, however, never exercised. Even when the enforcement of this control had been attempted, it had been successfully evaded. The methods of such evasion are well known, and the American railways made quite a practice of it.

In the beginning, this was done by means of a mixed agency both for the financing and the construction of a line. Agreements were entered into that the construction company will build against payment in shares instead of in cash. But the price for the work was fixed so high that it also compensated them against any loss due to the depreciation of the shares. This method of evasion was replaced later by another, by which the construction and finance agencies were kept distinct, but the members of the one were also the members of the other, and they entered into secret agreements that the former will indemnify the latter for the loss arising from the depreciation of shares. As before, the construction committee was paid so high that the sum covered

also the loss due to the sale of shares below par. In the last phase, the whole thing was stage-managed by means of a construction company which had definite connections with financiers. The concession was executed on behalf of a company to be formed, whose directors, however, were appointed subject to the confirmation of shareholders. The shares were bought up by the financiers of the construction company. These financiers paid in the amount to the full extent of the nominal value of the shares, but in case of loss arising from the sale of shares on the market, were to be indemnified by the construction company, which, as before, was to be paid sufficiently high to cover both the actual cost of the work done and the loss on the share market.

In such manipulations, however, both the financiers and the construction companies have their share of profits also. In order to bring the scheme to a successful issue, and yet make allowance for the loss of capital thus arising, in the first place the nominal capital must be calculated at a high figure, and in the second, the quality of work to be done must be inferior. The market was also overflowed with worthless paper and thus affected the public confidence even in sounder undertakings.

A few of the members of the Commission, however, were entirely of a different view. They held that a number of the evils mentioned arose from too great a limitation by law of the freedom of contract, and that the remedy lay, not in strengthening the law, but in relaxing it. It was argued that as railways did not offer any expectation of earning high profits, capital could not be attracted to them in the ordinary course. They maintained that the methods of finance which had been adopted were a natural development of things. Without them it would have been practically impossible to attract the large sums of money needed for capital outlay on railways.

The majority of the Commission decided against this view. The law, it was argued, draws a line between those schemes which are warranted by public needs and those which are not. The construction of every line is not a public benefit, if a broader view of the economy of a nation is taken.

(Sec pp. 162-74, Drucksachen No. 11, *Abgeordneten Hause*.)

APPENDIX C

Bismarck, who had so far been in favour of a mixed system, turned into a strong adherent of the system of State railways. Cf. the letter by Prince Bismarck, as the Imperial Minister, to the Prussian Government. (Anlage 30, pp. 191-6, *Eisenbahnpolitik des Fuersten Bismarcks*, von Dr. Alfred v. der Leyen.) The note referred to the evils of speculation in the following terms: "In addition we have had in recent times a financial

breakdown caused by over-production, affecting even the big companies. The lines already sanctioned and commenced are unable to proceed further, and even a sound financial part of the market has been thrown into embarrassment." The other evils mentioned are: (i) chaos in tariffs; (ii) high cost of working, and as a consequence, higher railway charges; (iii) insufficient use of the personnel. One argument deserves particular mention. It was pointed out that it was beyond doubt that if the railways were in private hands, due consideration of their financial rights and independence will prevent any far-reaching measure of control on attempts at reforms, by legislative methods. This was supported by the past experience, which showed that in spite of the Governmental pressure, such attempts had proved fruitless. From this it was concluded that the existence of private railways in a prominent position was not reconcilable with the public good.

APPENDIX D

The Imperial constitution had invested the Empire with certain rights regarding the railways. Articles 4 and 8 contained the general provision. Articles 41 to 45 enumerated those rights. Under certain circumstances the Empire could grant a concession of a line even against the opposition of the States concerned. In the interests of the general traffic, all the railways of the Empire should be managed as one uniform system, and new railways be laid according to uniform standards. Article 43 provided that the Empire should keep watch that the whole equipment be kept in order. Article 44 provided that the railways should arrange for through trains and have proper junction connections. Article 45 provided that the tariffs should be uniform and as low as possible, and be under the control of an Imperial system of tariff. The first step to make these provisions effective was to establish an executive organ of the Empire which could enforce its rights. Referring to the constitutional powers of the Empire with regard to the railways, Bismarck constantly emphasised the necessity of an executive body. Once he remarked: "There is no part of the Imperial constitution which is so clear, and apparently so easy of being carried into effect, as this where the Empire is invested theoretically with many attributions and yet is practically impotent. It is in several respects like a loaded gun without a trigger, this small addition is all that the Empire needs to make this part effective" (p. 59, *Die Eisenbahnpolitik des Fürsten Bismarcks*).

In the same debate, but in another place, he said the same thing, but in other words. "For the energetic execution of the rights, what we lack is an executive—within reasonable limits,

a power to punish" (p. 62, *ib.*). As a consequence, an Imperial board of railways (Reichseisenbahnamt) was established in 1873. It was found that even the establishment of this board did not lead to any real control (p. 67). The greatest failure in this respect was seen in the sphere of tariffs. It was found that it was impossible to regulate the tariffs from the general economic point of view so long as railways were in private hands. The Tariff Enquiry Commission, which was appointed to enquire into the faults of the existing system, laid special emphasis upon the financial side of the question of regulation, and it advised that "the transference of the financial risk to the Empire will considerably lighten the task of the tariff reform." Both the representatives of Commerce on the Commission laid stress on the fact "that the institution of uniform tariffs throughout Germany must necessarily be followed by a consolidated net of the Imperial railways covering the whole country" (p. 78, *Eisenbahnpolitik des Fürsten Bismarcks*). The attempts of Bismarck to regulate the tariffs failed on the ground, that such attempts presupposed a financial unity of the German railways which did not exist (*ib.* 88).

These experiences convinced Bismarck of the fruitlessness of any endeavour to regulate the tariffs until the railways became an Imperial unit. But these attempts, as noticed above, failed. Nationalisation of the Prussian railways, which were the most important part of the Imperial system, however, enabled Prussian railway administration to throw in their weight and work up the scheme of the uniform tariffs in Germany to a successful issue. Nationalisation of the Prussian railways was foreshadowed in the argument to the bill for transferring the railways to the Empire in the following words: "If the above-indicated efforts in the way of transferring the Prussian railways to the Empire miss their mark, then the Prussian Government will, doubtless, take energetic steps for the solution of the problem, and for the purpose, aim at a greater extension and consolidation of its own railways. The duties which Prussia owes to its fellow-members of the Bund have been sufficiently regarded, and nothing will stand in the way of our endeavours to remedy the scattered systems of railways and to fight against the overweight of private interests. The probable consequence of the policy in this direction will be that Prussia, through the extensions of Prussian State railways, through the full fruition of the influence which their possession will give it, will be able to extend the influence of its policy beyond its own borders" (p. 104, *Eisenbahnpolitik des Fürsten Bismarcks*—cf. the closing words of the note of Bismarck to the Prussian Government. They are with a few changes the same as those contained in the argument, *ib.* p. 205, appendix 33).

APPENDIX E

The reason for setting aside the first three alternatives may be profitably summed up below.

I. *Private Railways under Private Management.*—To achieve a unity of construction and management, it is necessary to have a unity of property of different railways. The former will be inconsistent with the maintenance of a number of financial unities. Reference is made to the difficulties which had to be encountered in order to have a uniform tariff on the German railways, and the limitations which had to be imposed upon it for safeguarding the financial interests of individual parties. If, on the other hand, all the railways could be transferred into the hands of one company, the monopoly which it would create would be irreconcilable with the public interest. Mere supervisory powers of the State, it is argued, are insufficient. "That a reform by means of law to regulate and define the powers of supervision must not only meet with an opposition from the railways, but with many other insuperable difficulties, is abundantly taught by the experiences of the last years. Even if this reform were attainable, it would satisfy the needs only temporarily." It is pointed out that the progressive nature of the industry dooms every legislation on railway matters to obsolescence after a brief spell of time. The failure of control is then outlined in all the departments of the railway industry. With regard to construction, it is pointed out that even if a systematic development of the railways took place, the duties of the State are not exhausted with it. It is then demonstrated by reference to past history that many of the lines proved themselves incapable of supplying all the necessary capital, and have been relieved only by the State coming in to furnish the aid, or that they have raised loans at exorbitant prices. In such cases insistence upon the stipulations of law would have only spelled disaster, both for the line itself and the public. Again referring to inadequacy of control over the tariffs, it is pointed out that the "State supervisory staff and the compulsory powers with which they are equipped have proved themselves insufficient to prevent, for a long time, evasions of orders and stipulations framed in the public interest. It is further argued that if an effective control could be exercised not only through laws but by means of a well-organised apparatus for control, then the supervision would be so minute that no private enterprise would be inclined to invest its capital in an undertaking which is submitted to such interference and limitations.

II. *Private Railways under State Administration.*—Instances of such railways in Prussia were a creation of necessity. A number of lines found their relief only by transference of the line to

State administration. This system, like the third, also suffers from the disadvantage of separation of property from administration.

III. State Railways under Private Management.—This form has definite advantages so far as the development of the railways is concerned. But the inconveniences and disadvantages of a system where the administration rights are divorced from property rights are great. Besides, this is advisable only if there is definite advantage in so leasing the lines to private companies. The management of the State railways has to be conducted, it is argued, as also in the case of a company line, by an expert body of administrators. Besides, the financial credit of the State was greater than that of a private company. The much-talked-of advantage of the leasing system, as giving the State a fixed income instead of a fluctuating return, is dismissed as being merely an apparent one. As soon as the returns of the railways go below the agreed sums, there is no guarantee that the latter sum will be given to the State. Furthermore, it is added that in case of short leases there is always a danger that the property is not properly maintained, whereas if the leases are for long duration the State has very little means of revising the conditions requiring alteration. Lastly, it was pointed out that new extensions or additions of lines are made difficult. The experience of Holland is quoted as an instance where such extensions were strongly resisted and were made possible only by giving over-advantageous terms to the lessees.

APPENDIX F

The distribution of Prussian State and Private Railways (exclusive of light railways) in the different provinces of Prussia in the years 1859, 1878-79, and 1899, is here shown.

The mileage of the private lines is arranged below that of the State railways.

	1859.	1878-9.	1899.
E. Prussia	—	594·36	1,803·78
	300·6	329·9	322·13
W. Prussia	—	593·36	1,425·86
	—	176·1	116·76
Brandenburg	331·1	541·62	2,974·26
(inc. Berlin)	455·6	1,567·0	475·65
Pomerania	—	398·19	1,526·58
	281·1	690·7	289·26
Posen	107·5	222·29	1,987·86,
	217·2	795·3	81·52

PRUSSIA

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	1859.	1878-9.	1899.
Silesia . . .	213·5	460·59	3,737·41
	865·7	2,134·7	197·41
Saxony . . .	—	196·62	2,549·86
	669·2	1,571·2	174·22
Schleswig-Holstein . . .	—	—	1,111·02
	—	807·6	259·08
Westphalia . . .	269·0	372·37	2,206·81
	393·5	1,264·2	246·48
Rhineland . . .	84·8	267·05	3,511·49
	777·8	2,147·8	135·94

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CHAPTER III

INDIA

SECTION I

THE GUARANTEE SYSTEM

BROADLY SPEAKING, State activity can take two forms : (1) merely a directive rôle ; (2) assumption of the duties of an entrepreneur. It has been seen that in England there was no necessity for the second type of State activity. Private enterprise was abundant. But the nature of the railway industry, which is essentially monopolistic, in the sense that monopolistic organisation is the only one suited for it, called for State regulation. For the realisation of the best results, a systematic plan of development was necessary. The absence of it led to an enormous waste.¹ In Prussia has been found an instance of partial refusal of the private enterprise to take up certain lines needed in the interests of the country. The State, therefore, stepped in to assume the rôle of entrepreneur, first as a guarantor of certain dividends to companies and then as an entrepreneur pure and simple.

In India private enterprise in the sense of an enterprise willing to take some risks of loss has been almost absent. This is explainable on two grounds : in the first place the

¹ The Individualistic school of thought asserted that an industry did not lend itself to a system of organisation and that the greatest collective benefits were to be found in the sum-total of the individual efforts. There was no deliberate plan behind this manner of achieving the greatest public utility. Railway industry in this respect diverges entirely from the rest of the industries. Organisation, spoken of in the strict sense of the term, is the foremost essential feature of it. This need of an organised plan is felt as regards both its development and management. In the development of railways one must attempt to satisfy the maximum of the traffic needs with the minimum of expenditure of capital, and this could not be done without considering the traffic needs of the country as a whole. Cf. 138-140. Emile Sax : op. cit., Vol. I.

people of the country were not technically advanced, and lacked capital resources ; in the second, the foreign enterprise which has access to the country for investments, lacked the knowledge of the conditions of the country. It is, then, to the peculiar circumstances of the country and the general low level of its technical education that the absence of private enterprise is attributable. " In many parts of the world the people can do nothing for themselves which requires large means and combined action ; all such things are left undone, unless done by the State."¹ This is more or less true, also, of the continental countries like France, Russia, Prussia, and the old monarchy of Austria-Hungary. In these countries, also, railway development would have been considerably delayed if the governments of those countries had not realised their importance both economically and politically and taken active steps to further the end. Mill explains this as due to a form of government which benumbs all individuality and initiative. " This is true, more or less, of all countries inured to despotism." The point to emphasise is that lack of private enterprise in such countries, in spite of fair prospects of commercial gain, is not an argument on which one can base an absolute preference for a State as against a private system of development.

It is an argument true only under particular conditions. In countries where private initiative has reached a high standard of efficiency it is difficult to believe that it will lag behind a Government in taking up lines commercially sound. In such countries it is the necessity of the development of lines which do not offer commercial returns, which may make it incumbent upon a Government to take their burdens. This may happen, when a new country is being opened up and private enterprise is not prepared to bear the continuous burden for some years and wait until its development offers returns which will ultimately pay the transport charges. Such cases, however, are covered by the argument of protection to infant industries. But here the followers of the Manchester school will call halt !

¹ Mill's *Political Economy*, Vol. II, 4th edition, p. 575.

According to this school, every enterprise which cannot yield direct commercial returns is injurious to public economy. It is alleged that no gain comes from carrying a thing from one place to another, unless it can be produced so much more cheaply that it can afford the cost of carriage to the second. "Ability to stand the transportation charge" is the test of the utility of the carriage. But this estimation of the railway industry is based upon an inadequate conception of the effects of the transport facilities generally. In the first place, the value of a line must be viewed together with its value as a contributory line. In the second, the benefits to the community are not to be gauged by the mere returns to the invested capital, but by its effects on the industry and commerce of the country as a whole. The total public utility of the service often will exceed the direct returns on the capital. The term "ability to bear the transportation charge" is after all a loose expression to employ. This ability may be determined by the market value of an article. Foreign competition may reduce the ability of an article to stand higher transportation charges. Apart from those directly concerned in the railway services, there are others also who share in the prosperity which the railways usher in, and these cannot be got at to pay their share. The railways cannot, and will not, find it to their interests to make their users pay the full benefit which they derive from them. Understood with these limitations, the expression carries a useful warning. If by a fair estimate it was possible to measure the total gains of the community from the construction of a line, and these could not set off the loss incurred in the running of a railway, then the public should not bear the burden. But the gains of the community are not the totality of the returns on the new enterprise, which has been made possible by the transport services. That would be so only if it was assumed that the capital and labour employed in that enterprise would have remained idle. But in fact what is really done is that better employment for both is found than before. The indirect benefits, there-

¹Taussig: *Principles of Political Economy*, Vol. II, pp. 362-5.

fore, consist only in the difference existing between the remuneration of capital and labour employed before and after a railway has been built, and not in the totality of their remuneration.

A Government, therefore, undertaking the burden of a line should be at least satisfied that these indirect benefits do not fall short of the deficit incurred. In weighing these, a Government may also sensibly take into account the cultural and political influences of railways.

If a Government has to take over the burden of such lines, it demands reasonably that it should take over, or at least participate in the profits of those which private enterprise is willing to take and find compensation from them.

In the following pages an attempt will be made to see the methods which the Indian Government adopted for the development of railways in India, and incidentally suggest the extent to which it may carry the development of railways in the country.

The real beginning of the railway development was not made until 1849, when Lord Dalhousie was at the helm of affairs in India. His experience of the railways and his connection with the Railway Board during its short existence in England had convinced him of the un wisdom of considering railways as mere private undertakings. His two minutes, one in July, 1850, and the other in April, 1853, will always be remembered as showing a great breadth of view and knowledge of railways. In the last he laid great emphasis upon the necessity of forming a system of trunk lines connecting the interior of each presidency with its principal parts, and the several presidencies with each other. The trunk lines proposed were : a line from Calcutta to Lahore ; a line from Bombay to some point in Hindustan ; a line connecting Bombay and Madras, and a line from Madras to the Malabar coast. The concluding lines of the Minute are well worthy of being quoted here.

Referring to the hopes of numerous benefits which he entertained of "this great instrument of improvement," he wrote :

*"Looking far before us to this possibility, I am anxious that the Government of India should early take warning from the errors which we have all committed at home in legislating for the regulation of railway works, and that so it should profit by the experience which others have dearly bought."*¹

Further he expressed a hope that the Government of India and the East India Company would *evē* avoid the error of viewing railways as merely private undertakings and would regard them as "national works, over which the Government might justly exercise, and was called upon to exercise a stringent and salutary control."

The policy, however, was to encourage private enterprise. Except for the Madras Government, which attempted to induce the directors of the East India Company and the Board of Control² to allow an experiment of direct construction by the State, every one was agreed to the policy of construction through the agency of companies. The Board of Control and the Indian Government were at first unwilling to submit to the proposal of guaranteeing the companies, but when it became clear that no companies were willing to undertake the construction unless guaranteed, they had to yield.

The terms of agreements given to the companies were what one now deems to be onerous to the Government. The first companies with which the Government entered into agreements were the East Indian and Great Indian Peninsula Companies. Great powers of control by the Government were provided for. Interest at 5 per cent.³ per annum was guaranteed to the Company on capital paid into the Treasury for ninety-nine years. The guarantee was agreed to be given as an advance which was to be repaid with interest at 5 per cent. from the profits above the guaranteed minimum, in such a way that half of the profits

¹ Para. 43 and 44, 20 July, 1850. Lord Dalhousie minute.

² The Board of Control was created by Pitt's Act of 1784. It was virtually a parliamentary body, the president being always a member of the Cabinet. The India Council traces its parentage to this board.

³ The guarantee was of the interest on the capital and not of a dividend to the shareholders. If the working expenditure exceeded the receipts, the sum paid by the Government on account of the guaranteed interest was to go to make up the deficiency, and the dividend to shareholders was to be rateably reduced.

were to be credited to the company and the other half was to be applied, firstly towards payment of interest on the debt, and then towards the extinction of the debt. When both the debt and interest were discharged, the companies were to take the whole of the surplus net receipts.¹ At the expiration of the term of ninety-nine years the whole property was to become the property of the Government, the rolling stock and other movable property being paid for at a fair value. The company might voluntarily surrender the line after completion on giving six months' notice, when the Government would refund the capital outlay. This clause was inserted as a concession to the shareholders; who expressed themselves to be aggrieved for not having a guarantee of a dividend. As a matter of fact the return on their shares was never reduced below 5 per cent. The deficiency in their receipts falling short of working expenditure was added to the debt on account of guaranteed interest, to be a first charge against surplus profits. The Government had the option of purchasing the line within six months' notice, after the first twenty-five years or first fifty years, the sum to be paid being the full amount of the value of all shares and capital stocks, calculated on the mean market value in London during the preceding three years. Instead of repaying capital directly the Government could commute it by payment of annuities payable half-yearly. The rate of interest to be used in calculating the annuity was the average rate of interest during the preceding two years received in London upon public obligations by the Secretary of State, and this was to be ascertained by reference to the Governor and Deputy-Governor of the Bank of England for the time being. This clause led to a great deal of uncertainty of interpretation when the lines were acquired by Government. From the wording of the clause it was not at all clear whether by

¹ The *Imperial Gazetteer* gives incorrect information on the point. According to it the profits were to be divided equally between the Government and the companies, without the limitation that the division was to continue only until the advances by way of guarantee were repaid. See p. 367, *Imperial Gazetteer*, Vol. III, 1908. Cf. the terms of the contracts reproduced in F.C. 412, August 9, 1869, particularly the clause dealing with the nature of division in the surplus profits.

the average rate of interest on public obligations was to be understood the total obligations then existing during the two preceding years or only fresh obligations incurred during those two years. The last interpretation would have meant a considerable difference for the Indian Treasury,¹ as the rate of interest had fallen considerably. Besides the power of general supervision and control, the Government had made two provisions in the contract, relating to (1) default on the part of the Company in payment of the capital or the execution of works, or in working in any other way; (2) default in properly maintaining works when line was opened. In the first case the only penalty provided was re-entry of the Government, and the companies were to receive back in any case the capital properly expended. In the second, the Government was entitled to enter on the property and execute everything necessary, setting off the costs thereof against the guaranteed interest.²

It was not long before the defects of this system began to show themselves. It was found that the guarantee had been fixed at too high a rate, which deprived the companies of all incentive to economy in construction. It was felt that the greater the amount spent, the greater would be the amount of stock which would stand at a premium. The guaranteed rate was sufficient to send up the stock in value. The prospect of a surplus above the minimum was considered to be too remote to induce economy. Nor was any limit placed to the amount of investments in railways and hence to the liabilities to which the Government might be led. Early in 1853 Lord Dalhousie in his Minute had expressed his views

"that interest will not be guaranteed by the Hon. Court upon any sum to be expended until it has satisfied itself that this sum, which it is proposed to raise for the construction of any extent of railway, is not more than sufficient for the work, well and economically carried on, or without some secure provision

¹ See the Draft Report by Campbell-Bannerman—Special Report from the Select Committee of the E.I. Railway, 1899, No. 226, H. of Commons, and also Q. 424 to 440 and Evidence to the same report.

² Refer *Juland Danvers Report on Railways in India*—1859, pp. 50, 51; also *East India Railways*, 1869, H.C. 412, pp. 74-8.

for the completion of the line within a period to be named . . . if these conditions be observed it cannot be correctly said that all inducement to economy and exertion is lost. These will be requisite to enable the railway company to construct the line within the sum and time allotted for it.”¹

But the type of the contract adhered to did not contain any such stipulation. Lord Dalhousie's successor, Lord Canning, objected to the present operation of the guarantee system, and he pressed that a limit should be placed upon the capital to be guaranteed. The members of the Viceroy's Council were still more vehement in their opinion. Sir J. P. Grant, the president of the Council, totally opposed the guarantee system. In his Minute dated May 5, 1857, on the Eastern Bengal Railway, he gave forcible expression to his views :

“ My conviction that the control of the Government has been in a great measure instrumental in bringing about the success of the lines now opened has been already stated. But although this control is an essential part of the present system and without it a guarantee system is impossible, the double management is a great evil. The necessity of submitting to so great an evil is the vice of the system.”

It was pointed out that with the same establishment, if the work was transferred to the Government, the then existing antagonism would cease altogether. The division of authority and responsibility was held to be the chief source of obstruction to progress. But the Government on the other hand could not reasonably be expected to relax its control over the expenditure of public money. “ The contingency of drawing surplus profits was alleged to have the same effect as the lottery has in inducing people to subscribe.” The system was condemned as being artificial and complicated, and “ contrary to received principles,” and having nothing to recommend it from a financial point of view. On the contrary it was urged that the system was nothing more than the raising of money by a special public works loan ; but under the most disadvantageous

¹ Para. 77. Dalhousie, *op cit.* Cf. the early guarantee system in Austria, where also there was no provision made for a maximum limit of expenditure guaranteed, and this led to great extravagance.

conditions for the people to be taxed. These conditions were criticised in the following terms :

“ The money, generally speaking, is not raised at a guaranteed minimum rate of interest less than that of the open loan of the day. Instead of the repayment of the principal being at the option of the Government and the lender having no right to claim repayment, by this system the Government cannot repay the money, whatever may be the loss by keeping it, and the lender can at any moment reclaim it, or an equivalent annuity, whatever may be the financial position of the Government at the time.”

This Minute may be considered to be the first precursor of the period of direct State Construction, which commenced after 1869. When later it was decided to revert to the guarantee system again, some of the defects of the earlier guarantee system, as it will be seen later, were removed. The evil of dual responsibility, however, has not lost its force entirely, although it has not shown itself in that sharp manner of the earlier period. The interests of the companies can no more be held to be antagonistic, as the chances of a share in surplus profits could no more be held to be remote.

The financial member of the Council, the Right Hon. S. Laing,¹ also recorded an unfavourable view of the Guarantee system in his Minute of April 1, 1861. He believed that as the management was non-resident and the data of cost and traffic were uncertain, which made the companies take almost exclusively to the Guarantee, all the advantages of private enterprise were neutralised. Although he saw some use in employing the agencies of companies for raising capital, he was averse to their constructing the railways through their employees. He asked :

“ What conceivable inducement have the engineers and agents of the companies to do their work economically? Even the shareholders have the faintest possible interest in it, for they have their 5 per cent. in any case, which is all they ever looked to. But the interests of all practically concerned in carrying out the work are the other way.”

The directors were anxious to have the patronage of

¹ He was connected with the Board of Trade, Railway Department before he came to India.

buying millions' worth of rails and rolling stock and freight-ing thousands of tons of shipping. The engineers, so long as anyone found the money guaranteed at 5 per cent., were inclined to do everything *à la grand*, which would enable them "to do something worthy of Brunel or Stephenson." It was further urged that the disadvantages of rigidity and formality, and perhaps a little less special knowledge of some points connected with the railways of the Government engineers, could be removed, as it was as easy for the Government to employ a railway engineer as for the company. The evil of divided control was also emphasised. The remedy he recommended was that the Government should have absolute control over the servants of the company— a control which would enable the Government "to send every one about his business who neglects his duty or who fails." The Government of India, in forwarding the Minute to the Secretary of State,¹ agreed to the evils pointed out by Mr. Laing, but expressed their dissension from the remarks which threw aspersions against the engineers of the companies, and suggested that it was possible to fence the Guarantee in such a manner as will avoid the serious evils. They also recorded the opinion that the results achieved within the last ten years would not have been achieved without a guarantee. It is not clear from the despatch, however, whether they meant that private companies would not have undertaken the work without a guarantee, or that if the State had undertaken the work they could not have proceeded at the same rate. The first remark was undoubtedly true. The second would require some substantiation before it could be accepted.

It is useful at the present stage to indicate briefly the nature of the supervision exercised by the Government. The following rules were laid down by the Government of India for the guidance of their consulting engineers.²

(1) "All questions of general importance shall be referred to Government for decision.

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¹ Despatch, No. 68, July 27, 1861.

² *Juland Danvers Report*, 1859, p. 6, para. 5-7

(3) "All matters of routine or payments, or acts in accordance with rules, precedent, or special agreement duly sanctioned, or undisputed contingent expenditure, may be dealt with by the consulting engineer without reference to Government.

* * * * *

(5) "The consulting engineer may, without reference to Government, reduce the amounts of indents, or direct designs, or propose operations to be modified, if he thinks it necessary; but the agent in such cases, if dissatisfied with the decision of the consulting engineer, may always request that the matter may be referred for the final orders of the Government."

* * * * *

In London, an official director attended each board of the railway companies in London, and possessed a power of veto on all the proceedings of the directors. The financial arrangements of the companies were made with the Secretary of State.

Serious complaints were made that their interference led to delay in commencement and construction of railways. Ultimately a parliamentary Select Committee was appointed to inquire into the causes of the delay. As for the Governmental control, it was asserted that though some cases were cited "in which Government superintendence has been productive of vexation and annoyance to the railway official," no very material delay in the construction of various lines appears to have resulted therefrom.¹ The main impediments to progress were found to be in difficulties of transporting materials to their destination, and the lengthy communications between the agents and the boards of companies in London and the Government departments. Their main conclusion with regard to the governmental control was that it was not only requisite for the protection of Indian revenues from undue expenditure, but also valuable to the interests of the shareholders. But in view of the cumbrous nature of the machinery, and the complicated character of the system, "the greatest defect of which is the facility it affords for the evasion of responsibility," it was recommended to have the duties and responsibilities of all parties concerned well defined. All the

¹ Select Committee of 1858.

official witnesses averred that direct Government construction would have been carried out more economically. The non-governmental officials, on the other hand, declared in their evidence that the enhancement of cost was attributable to the undue prejudicial minuteness, leading to irritation, and producing depression in tone of energy from absence of responsibility, with which the control of the Government had been exercised.

No doubt exaggerated opinions were expressed by both the Government and company officials. It is difficult to say how much they were coloured by the zeal and the sense of importance that the respective officers of the companies or the Government felt for their services. The fact of the waste, however, will not be denied,¹ especially in the early days when the system of audit was very imperfect, technically called post-audit system.

Remedies suggested at various times for removing the evils.

The problem of reasonably fencing the Guarantee had engaged the attention of the Indian Government for a long time. Lord Dalhousie's opinion with regard to fixing the amount of capital on which interest might be guaranteed has been quoted above. Lord Canning followed it up by the same recommendation that the essential element of the Guarantee system should be that "previous to the commencement of work a thorough and critical estimate should be made of the whole line . . . ; exactly such an estimate as would be required by a company in view to inviting tenders in England for a lump contract . . ."; and that this sum, together with a handsome margin for contingencies, should be the capital guaranteed. The governmental supervision could then reasonably be re-

¹ Lieut.-Col. Chesney, who had been the auditor of railway accounts in India, described the system in these words. "It was called technically 'post-audit,' nothing was known of the money expended till the accounts were rendered." The result of the system was that in one railway, the East Indian Railway, four millions sterling were improperly spent and it was too late for the Government to disallow the expenditure. *Report of the E.I. Finance Committee, 1872, Q. 2623.* Before the same Committee The Right Hon. W. N. Massey, who had been a finance minister under the régime of Lords Lawfence and Mayo, said: "The E.I. Ry. cost far more, if not twice as much as it ought to have cost." *Ib., Q. 8867.*

stricted only to the quality and progress of work.¹ But the Secretary of State was not disposed to agree with the Indian Government, on the ground that the estimates could not be accurately made and that any possibility of risk upon the shareholders would prevent "the flow of English capital or the application of English enterprise." It was suggested that even the contingency in the present contracts, under which the dividends may be reduced below the rate of guaranteed interest, had to some extent checked investment in Indian railway securities.²

The Hon. S. Laing, in the Minute above referred to, agreed that the agency of the companies for raising capital was costly. "No doubt, as in all roundabout processes, we pay dearer than if we did the same thing directly." But he was of opinion that if the money was raised in shares, with a proper deposit paid at first, one could be sure of getting money as it was wanted by making calls. A Government, according to him, could not be perpetually raising loans. But the actual construction of the works, he thought, should be carried on by "lump contracts" with respectable contractors. This system, it was claimed, would have the advantage of reducing the function of the Government to the manageable one of seeing that the work is not paid for until performed according to contract, and at the same time would furnish the necessary individual management.

The Government of India could not subscribe to the views of Mr. Laing with regard to retaining companies merely for the purposes of raising loans. They referred to the view of Sir W. Denison, the Governor of Madras, who, considering the Minute by Mr. Laing, expressed his opinion that the experience of the Government of New South Wales had proved that money could be raised as it was wanted in the London market, either by the sale of debentures, or by a loan floated according to the state of the money market, and expressed their concurrence with it.³

¹ Despatch No. 2, dated November 29, 1858.

² Despatch No. 16, dated February 24, 1859.

³ Extracts of any correspondence on the subject of the Extension of Railways in India. H.C. 412, August 9, 1869.

Attempts at forming independent companies, a failure.

In the meantime, as the means of remedying the evils of the Guarantee system were being discussed, a company was formed in England, called the Indian Branch Railway Company, with the avowed object of building railways in India without a Guarantee. The assistance which the Government offered was a maximum subsidy of £100 a year per mile open for twenty years. No interference on the part of the Government was involved in the system. The projectors would have naturally found it to their interest to complete their works economically and rapidly. But after a long protracted correspondence the company pleaded inability to raise the required capital without a Government Guarantee. The company had not entered into a formal execution of the contract, but it was virtually understood that there was a settled agreement as to terms. As a matter of fact, a section of the line had been already started. The B.B. and C.I. and G.I.P. also offered to execute further extensions of their lines on the same terms, but ultimately with the same result.¹ It was clear that a 5 per cent. guarantee was almost a *sine qua non* for the enlisting of private capital. The new contract drawn up differed in no material respect from the previous ones, except that the State could, at the end of twenty years, and at any decennial period after that, acquire the property. The land was granted for 999 years instead of 99.

Review of the position by the Government of India.

When the Government of India was informed of the abandonment by the Secretary of State of the attempt to accomplish the construction of railways in India without a guarantee, it expressed itself as quite prepared for the result. The result having been conclusively established, the Government reviewed its whole position in relation to the railways. Under the Guarantee system it was possible to secure the construction of any line which the Government desired to be executed. It was, therefore, thought necessary that

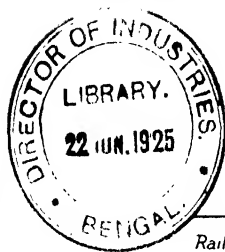
¹ Correspondence between the three companies and the Secretary of State reproduced in H.C. 412, August 9, 1869, op. cit., pp. 3-34.

the Government should not be influenced by anything but its own conclusions. It was urged that the knowledge that the Government had reopened the system of Guarantee would bring up many speculative projectors, who would take up schemes for which they would without difficulty obtain the support of colourable authority. Such schemes would be pressed upon Government under such patronage as could be secured, and unless preparation was made beforehand to meet their schemes, the Government might find itself involved in undertakings forced upon it in a way which it would have cause to regret afterwards. A limit was then set forth upon the expenditure to be incurred for the extension of railways. It was suggested that a fixed sum chargeable to the revenues of the country should be stated as a limit beyond which the Guarantee charges should not go. Extension should be allowed only when the actual charge is reduced by an increase in the net receipts. It was further recommended that no company should be permitted too great a development. "An overgrown company is likely to be a source of embarrassment or even danger to Government from the power of personal influence which it must possess, while its efficiency for the essential purposes for which it is created is almost certain to be diminished." All subsequent history proves the author of the last part of the statement mistaken. The efficiency of a company has usually increased with its growth. Necessity for greater economy in construction was emphasised. It was further laid down that it should be the understood condition of every grant of Guarantee that within ten years the line should be independent of Guarantee. By estimates of the character and the probable growth of traffic, and by comparisons with neighbouring lines, it could be roughly ascertained what would be the returns on such a line. The cost per mile of railway should be so calculated that within a certain period it will pay the guaranteed interest on the capital. The guaranteed capital should not exceed this figure, with due regard, of course, to unforeseen circumstances. It was also proposed that the servants of the companies should look upon themselves as agents for carry-

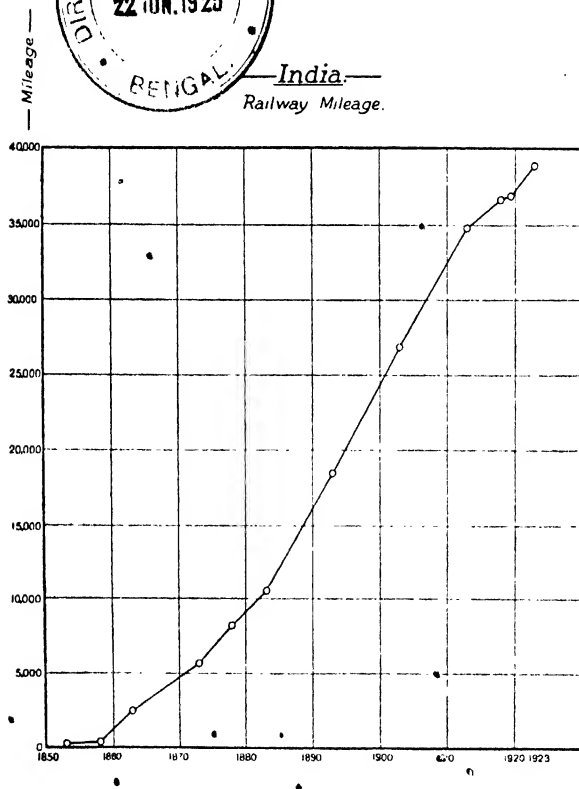
ing out railways in conformity with the wishes of the Government ; this for two reasons : (1) because the Government was directly interested in the economical construction of railways ; (2) because it was politically important to place plenary powers in the hands of the supreme authority. On political grounds it was also urged that it was dangerous to have large investments by English capitalists in India. The occurrence of any serious political difficulties would have a most calamitous effect on the holders of the Indian railway stock. It was therefore recommended that in the interests of British investors the Government of India should by degrees obtain complete possession of all the railways ; for this purpose a gradual purchase operating in the manner^a of a sinking fund was held advisable. As regards the profits above the guaranteed minimum it was claimed that either the whole of the excess profits should go to extinguish the Guarantee debt, after which the company may have them in full, or that they should be divided permanently between the Government and the companies. The real stimulus to economy, according to the despatch, lay in strict supervision over the expenditure on the first construction. The management was susceptible of correction and improvement at all times.¹ The Government only expressed the view which had grown in strength with each day's experience of the Guarantee system. The political fears, one is tempted to believe, were dangled before the Secretary of State to obtain his consent to greater powers being vested in the Government of India.

The Secretary of State in his reply disposed of the claims of the Government of India towards greater authority, by saying that no company will agree to the terms pressed for. As for the suggestion that it would be politically dangerous to have large English capital invested in Indian railways, it was pointed out that the danger would in no degree be removed by the adoption of the proposal to buy the railways. For, however or whenever they might be bought, it would

¹ Despatch No. 125, Railway, December 1867. Minute by His Excellency Lord Lawrence, dated August 16, 1867. . . . Major-General the Hon. Sir H. M. Durand, September 20, 1876.



India.
Railway Mileage.



still be with borrowed money. As regards the manner of dealing with the surplus, it was stated that if in any future contract the prospect or the possibility of such a surplus were interfered with, much higher terms would be necessary to ensure success in getting the share capital. It was observed that the political and military advantages of present commercial railways would be cheaply purchased even if the railways were costly to the Government.¹ This correspondence may be said to have led to a rapid development in the idea of construction through the direct agency of the Government. Indeed, it would not be entirely wrong to suggest that the Indian Government would have long before declared itself for this policy were it not that it was the declared intention of the Home Government to encourage private enterprise.

Growth of the railway under the original Guarantee system.

The railway net under this system grew in the following manner :

Year.	Mileage	Year	Mileage.
1853	22	1864	2,936
1854	73	1865	3,323
1855	173	1866	3,530
1856	275	1867	3,937
1857	291	1868	4,017
1858	432	1869	4,287
1859	626	1870	4,833
1860	838	1871	5,078
1861	1,583	1872	5,383
1862	2,353	1873	5,872 ²
1863	2,490		

The average number of miles added up to the end of 1860 was about a hundred yearly, but after that the mileage rate increased to about 400 yearly. The total capital expended up to the end of 1868 was about 78 millions. In the first five years the aggregate outlay was 3½ millions, and since then the average has been about 5 millions yearly. The

¹ Despatch, Railway, No. 90, November 24, 1868.

² Compiled from the tables in Extracts of any correspondence, August 9, 1869, op. cit., p. 28; and *Juland Danvers Report for the years 1873-4*. C. 1070 (year 1874).

claims on the Government on account of the Guarantee up to the same time amounted to 13½ millions. Further extensions continued to be made by the guaranteed lines. The Government did not embark upon the policy of constructing railways until 1872. Until that date the lines constructed by the State amounted to hardly 223 miles. The railway capital raised through the guaranteed companies amounted in that year to £94,725,815. Of this amount £82,893,790 was receiving interest at 5 per cent.; £1,349,970, 4½ per cent.; £4,132,450, 4½ per cent.; £1,302,550, 4½ per cent.; and £4,516,528, 4 per cent. per annum.¹ The total amount payable as interest to the companies up to 1873 amounted to £47,632,471. The aggregate net revenues of the companies amounted to £24,343,033. The net amount advanced by the Government worked out at £23,289,438. None of the companies had repaid the advances on account of the Guarantee.²

SECTION II

MODIFIED GUARANTEE SYSTEM AND BEGINNINGS OF STATE RAILWAYS.

Before one passes on to discuss the radical change which had come over the views of the Indian Government as to the methods to be adopted for the further development of the railways in that country, it will not be inappropriate to throw a retrospective glance over the opinions of the sponsors of the Guarantee system, with regard to the con-

¹ The capital was divided at the time in the following manner:

	Per cent.	£
Share capital at	5	80,282,550
" " "	4½	1,349,970
" " "	4½	500,000
Debentures at	5	2,611,240
" " "	4½	1,707,450
" " "	4½	1,302,550
" " "	4	1,324,100
Debenture Stock at	4½	1,925,000
" " " "	4	3,122,428
Money not bearing interest (the sum consists of premiums on shares or stock issued above par)		530,527
		<u>£94,725,815</u>

The figures are taken from *Juland Danvers Report*, 1873-4, op cit,
² *ib.*, p. 25.

struction of railways by the State directly. The early proposals for the same, as has been noticed above, met with a feeble response. In spite of the mixed purpose which the railways were supposed to serve, and the absence of private enterprise in the real sense of the term, the English mind insisted upon looking on railways as beyond the scope of Government.

"I hold," said Lord Dalhousie, "that the creation of great public works, although they serve important purposes of State, and are mainly intended to be used in those multifarious operations which the enterprise, the trade, and the interests of the community for ever keep in motion, is no part of the proper business of the Government."

He therefore deprecated any idea of direct promotion of railways, with the added reason that under the special circumstances of the time, when private enterprise showed itself so feebly, when English capital was so rare, and when there was such good reason to anticipate successful results from its profitable investment, it would be impolitic to set aside the several associations presenting themselves to compete for the advantage of supplying India with that which she so much needs.¹ He laid great stress upon the importance of the encouragement of English capital and energy, which he hoped would be induced to "more extensive employment of similar capital, and similar efforts, in connection with the products and trade of India."² Whether an example of successful operation by the State in the railway industry in India, and the association of large numbers of investors in the State railway securities, would have achieved the same object to the same extent or not, is a reasonable question to ask, but it seems to have escaped the consideration of the Viceroy.

As an historical fact it has to be recognised that the adoption of the Guarantee system almost bred a habit with the investors to look for a guarantee before they ventured an undertaking in India. The negotiations with the Indian Branch Railway Company which have been referred to above are illustrative of this fact. In his evidence

¹ Dalhousie's Minute, 1853, *op cit.*, para 72.

² *Ib.*, para. 74.

before the Indian Finance Committee, Mr. Thornton, who was the Secretary to the Public Works, said: "But when once the companies had been guaranteed then there was no chance of unguaranteed companies coming forward."¹

Minute by Lord Lawrence.

In one decade much water had flowed under the bridges. The views of the Government had undergone a serious change. Frank and open declaration was made in a Minute dated January 9, 1869, by Lord Lawrence. In this Minute, which has passed to posterity as one of the most able statements of the case for direct construction by the State, he reviewed the case from both the financial and administrative points of view and concluded that the guaranteed company system offered no peculiar advantage which could be set off against its evils, and which could not be secured by the State agency. The Minute may also be recognised as an important pronouncement upon the limit which should be placed upon the expenditure to be incurred for the purpose of extension of railways. A broad review was also taken of the system of extending the railway net.²

Referring to the objection that the prosecution of public works by the Government was an interference with private enterprise (which was said to be the proper agency by which works like railways should be carried out), he said it was an abuse of language to speak in that strain. He then asked:

"Is it reasonable or consistent with the true interests of India to continue a system under which the revenues have to bear the whole risk or loss and can derive no direct benefit from railway construction, in preference to one under which with a risk certainly no greater and probably much reduced, the whole

¹ Op. cit., Q. 1863-64. He based his belief on the following ground: "Considering how this country (England) is growing in wealth and what an immense amount of capital is seeking investment which I cannot find in England, and goes to South America and other countries abroad, I cannot conceive that it would have persistently neglected India."

² It was later known that the Minute was actually written by Sir Richard Strachey—in charge of the public works—see *Public Works and Finance of India*, by the same gentleman and his brother. He acknowledges himself to be the author of that Minute, p. 91.

of the direct profits can be added to the public revenues and made available for reducing taxation or preventing the imposition of new burdens?"

Financially, it was argued, the Government could derive no benefit from the present system.

"So long as the actual liability to pay the interest falls upon the State, as would be the case whether money were provided by loan directly or as guaranteed capital, it is evident that the standard which regulates the rate of interest that must be paid to command money will be the probable solvency of the Government. The intervention of a company could not add to the security in the smallest degree, nor to the facility of obtaining money, nor would the Government thereby be freed from the pressure caused by the necessity of paying the yearly interest."

Experience, it was pointed out, had shown that even in times of political danger, the power of the Government to borrow would be greater than that of the companies.¹ No doubt one of the most important advantages which were claimed for companies over the Government in railways was that they work vigorously and without stoppage in times of financial difficulty. "Recent experience," the Minute went on to add, "has shown that is very far from having been the case."²

¹ Read the evidence of General Strachey before the Select Committee on E. I. Railways, 1884, Q. 297 and 298, by Sir George Campbell. They are worth quoting here.

Q. 267.—During your examination I think the suggestion was made that one of the advantages of companies is this, that the companies, having undertaken the work, may be expected to carry it on continuously, whereas the credit of a Government is variable, and that there have been occasions when a Government has been obliged to stop public works on account of financial difficulties. Now, what I want to ask you is this: Does not that apply to works which are constructed out of revenue, within your experience has there been a time when a Government having undertaken a great work to construct from borrowed money has fallen so low in credit that the Government of India would have any difficulty in raising money in the market supposing they were prepared to carry on the line without reference to the immediate surplus or deficit of revenue? No, it is quite true that it has not; so far as my knowledge goes there has never been any difficulty in carrying out works of that class.

Q. 268.—Even in the worst periods of the Mutiny, the Government were able to raise money not on very exorbitant terms, were they not? —And they had to supply money to the Guaranteed Companies.

² Reference was evidently made to the Indian Branch Railway Company, which, having undertaken to do the work independently of any aid, after a short while applied to the Government for a loan, and subse-

Referring to the alleged objection against the present public works system, that the Government operations were necessarily intermittent, it was rejoined that this could not apply to works constructed with borrowed money.

"The outlay on public works in India has avowedly been treated as mainly dependent on the existence of a surplus revenue, which can be usefully applied in this way so long as it exists, but which ultimately becomes available for other purposes if pressure arises. It is unreasonable to think that if the Government deliberately borrowed money specially for railway construction, the works would be stopped on every occasion of temporary financial difficulty, as has been alleged."

The position taken up in this Minute gained still greater strength owing to the declared policy of the Secretary of State¹ that the Government of India should carry out what were then termed political lines, as distinguished from commercial lines, which were to be reserved for guaranteed companies. In his despatch the Secretary of State based his preference of the direct State agency on the reasoning that the number of persons who were willing to invest in guaranteed railways was limited, and that the market might be easily glutted with this description of securities if they were too freely offered. It appeared to him that the Guarantee system was properly applicable only when there was a reasonable hope that the profits would, in a moderate time, rise above the amount which the guarantee covered. It was thought inadvisable to weigh down the market for military securities by the introduction of a stock which could never rise to a premium. Lord Lawrence took exception to this policy as involving the Government in a false position.

"The Government," he said, "is to take all the unprofitable lines for itself, and give all the profitable ones to private speculators, carefully guarding them, however, at the expense of the State, against any possible loss. . . . It would suffer in reputation from the results of the management of its own lines of rail-

quently refused to execute the works unless guaranteed. But it may be mentioned that this was during a period of great monetary crisis in England—the famous crisis of 1867.

¹ Despatch No. 3, dated January 16, 1869.

ways, which would necessarily be everywhere unsuccessful. The true cause of this would certainly be overlooked, and the discredit of the financial failure would be used as a weapon against it in all its relations with the companies."¹

Nor, it was argued, was there any advantage from the point of view of greater economy of construction and management, by the interposition of a guaranteed company.

"The history of the actual operations of railway companies in India gives illustrations of management as bad and extravagant as anything that the strongest opponent of Government agency could suggest as likely to result from that system. Some of the best constructed and most economical Indian lines have been carried out under departmental management."

This method, it was therefore concluded, did not differ from that which was generally followed by the Government. As for the contractor's agency it was as available to the Government as to a company. "I have not heard," it was added, "of any useful independent action taken in relation to Indian railways by the London Boards, which would be lost under a well-arranged system of Government management."

With reference to the future progress of railways, it was once again asserted that this must depend on the continued appropriation of a determinate annual sum from the revenues to cover the interest on the capital employed until the lines

¹ Piecemeal operation by the State is always attended with serious difficulties. France furnishes one with an obdurate object lesson. In the eighties of the last century the French Government took over the construction of certain lines, which had been originally granted to certain companies but which were abandoned by them on account of their unremunerative character. But this direct construction was not accepted without serious warnings. In the chamber of deputies it was urged with considerable force that it was extremely surprising that the State should propose to undertake the construction of unproductive lines, leaving the productive ones to others. The people who raised their voice against it were precisely those who had favoured the purchase of French railways. Commenting on the statements then made that the experiment would be useful only if the State operation extended itself on a homogeneous system, the Public Finances Commission, which examined the new French Bill, which has now passed into a law, thus express themselves. "It is a wise advice to remember. "It is precisely because experience has only been gained in France on unproductive lines that the discussions continue to be given for and against the State régime, whereas no true argument can be furnished one or the other way" (p. 47, *Report of the Commission of Public Finances on the French Railways Bill, 1920*).

become self-paying. *A propos* of this limit it was urged that the capital accounts of old lines should be kept as low as possible, in order that more money be made available for extensions. The then existing methods of adding to the capital accounts were held to be open to grave objection. This view would be perfectly correct if it were coupled with a limitation that no capital outlay should be incurred on old lines without creating clear additional paying power in return. If additional capital was clearly invested in better equipment of a line, and thus increased the returns in proportion to the investments, there would be evidently no objection. It was estimated that by a yearly capital outlay of $3\frac{1}{2}$ millions, about 300 miles could be added yearly, provided the cost could be brought down to about £12,000 a mile, and yet the net charges on the revenues for interest would not exceed £2,000,000- which was held to be the limit which the Treasury could bear.¹

The policy as regards the further extension of the net was laid down in the following words :

"Our first aim should be to fill in a secondary series of subsidiary *main lines*, always basing them on the old lines and laying them out with careful attention to the importance of making them form a consistent whole."

The completion of such a network should necessarily be unimpeded by preconceived conceptions of convenience and refinement. Great stress was, therefore, laid on the point that the skill in engineering implied the successful adaptation of the art of construction to varying circumstances. "For a poor country, economy is one of the essential conditions to be complied with, and its requirements may be as rigid as any of those imposed by physical conditions." This pronouncement may be the parent of a metre-gauge system of railways in India, which, though experience has proved it to be a defective one, cannot be held to be an economic blunder but an engineering one. Economically speaking, the main idea of economy in construction has not lost its importance, although the particular

¹ See the table setting down these calculations in para. 33 of the Minute.

mode of its being translated has proved to be a failure.¹

The Minute by Lord Lawrence was accepted wholly by the Government of Lord Mayo, who was his successor, and it met with the full concurrence of the Secretary of State, the Duke of Argyll, whom a change in the ministry had brought to office. It was held that the considerations which induced the Government to employ the agency of the companies in earlier days had lost their strength, and the Government was at the time fully justified in securing for itself the full benefit of its credit² and the cheaper methods at its command.

The policy which was inaugurated by the acceptance of the Secretary of State of the proposals by the Indian Government continued until about 1882, when again there was a return to the employment of companies.

The extent of progress.

The main facts to note during this period are (1) the extent of the progress of railways under State agency; (2) the machinery created for the purpose of the execution of works. From 1868 to 1880 another 20 millions had been raised through the guaranteed companies. The State raised about 31 millions directly for the purpose of railway construction.³ The total outlay on both the guaranteed and State railways amounted to about £130,000,000 in the year 1880.⁴ The mileage added through the agency of the Government totalled about 2,493 up to 1880; the additions which were made by the guaranteed companies were comparatively small. Even in their immature condition--for hardly any of these were more than five years old--the State lines were earning 2 per cent. on the total capital--a result which was decidedly more favourable than that

¹ The German *Nebenbahnen* (side railways) are lightly built, but with the same gauge as the main railways.

² In his speech on the Financial Statement for India in the House of Lords, he stated that the Government could borrow at 1 per cent. less than through the agency of companies.

³ *Report of the Famine Commission*, Part II, 1880, p. 148.

⁴ Compiled from the figures given in the Report on the Public Works in India by the Select Committee of 1878, p. v, and those contained in the appendix to the report by the Select Committee of 1884 on the R.L. Railways.

secured on the guaranteed railways at a corresponding period of their existence. An important part of the return invested in these lines appeared in increased receipts on the older guaranteed railways.¹

The policy of financing by the Government of India.

The policy of financing the railways had been laid down by Lord Lawrence, and followed and completed by his successors.

It was laid down that in making provision for the public works, the consideration which must most weigh with the Government should be that the net aggregate charge on their account, which falls on the general revenues of the country after taking credit for the income earned, should not exceed a certain limit. This fixing of a limit was most advisable, as the railways were not paying their capital charges, nor could any definite prospect be held out. While framing such limit of expenditure to be incurred, it was of course necessary that the guaranteed railways should form a portion of a general scheme of financing the railways. The guaranteed railways still involved the Government in a liability.² It was, therefore, deemed essential to devise some scheme by which the borrowing should proceed on a well-considered basis and not be merely a leap in the dark. In 1873 Lord Northbrook, who had then assumed the reins of office in India, caused forecasts to be prepared of the yearly outlays on both the irrigation and railway works, and to this end also, of the probable charge for the old works. The forecast was for five years, and was prepared by the Public Works Department and checked by the Financial Department.³ The actual charges on the general Budget on account of the revenues were found out to be

¹ Cf. the *Report of the Indian Famine Commission*, 1880, p. 148. Viewed as a whole, "the net receipts from the whole of the lines in which Government is concerned amounted in 1878 to 5½ millions on a capital of 114½ millions, giving a return a little less than 5 per cent."

² For the first time the capital expenditure of the guaranteed companies and their returns were shown in the Accounts of the Government.

³ Q. 1121-26. Select Committee on Public Works in India, 1878. Lord Northbrook explained that the object of the forecast was mainly to show the probable future liability upon the revenues in carrying out the scheme of railways and irrigation as a whole.

over-estimated, the charge on account of the guaranteed railways having fallen beyond all expectation. "The dead-weight charge" on the general revenues accepted was about £2,000,000. But in 1876 this charge had already fallen and continued to stand low. In conformity with this agreed principle, the capital outlay could have been reasonably increased. The State agency had proved itself quite capable of constructing railways, raised monies directly and cheaply, and shown successful results of working. All these things made out a good case for increasing the pace of new construction. But new difficulties arose to complicate the problem.

The views of the Secretary of State.

These difficulties are indicated in the enunciation of the policy recommended by the Secretary of State in his despatch to the Government of India. It ran thus :

"(1) That no works were to be constructed with loans except those likely to be remunerative, by yielding in the shape of annual income a sum equal to the interest on money expended on their construction, including interest during construction ; (2) That all loans for public works be raised in India, it being inexpedient to increase the 'home drafts' in England."

The first proposition meant a serious recession from the old position taken up on the faith that the indirect advantages of railways more than compensated the State for the direct loss incurred. But it is difficult to appreciate this attitude, especially when considering that the old railways had begun to be remunerative. This view, however, was not shared by the Indian Government. They reaffirmed the principles regulating their expenditure on "extraordinary works."¹

"The rate of expenditure," they said, "has been regulated in forecasts of 1873-5. These calculations show that any additional interest on account of money borrowed for the purpose of constructing extraordinary works will be met from the increased receipts derived from similar works, which have been or will from time to time be completed and brought into operation. We consider that this method of calculation, which has now been

¹ As distinguished from works whose charges are met from the ordinary revenues, the expenditure for extraordinary work is met by borrowing.

tested by the experience of three years, is safe and that it enables the Government to control the expenditure upon 'extraordinary' works more efficiently than if the works were to be admitted under that category merely upon the faith of estimates of the returns which they may give, for such estimates are not unfrequently fallacious."¹

If railway development were looked at from a purely commercial point of view, the attitude taken up by the Secretary of State was fully justifiable, but considered from a general economic point of view, it was a short-sighted policy. Subsequent results have sufficiently shown its unsoundness. Railways have since the beginning of the last century been a considerable source of financial help to the State, directly and indirectly. Speaking at this stage with all the experience of the past, one may venture to suggest that the dead-weight annual charge could have been added to the capital account, instead of being charged to the revenues, if relief to them was necessary; the loss which the previous generations of taxpayers bore would have been more equitably distributed amongst the later generations who have benefited from the blessings of railways more than the earlier ones. But here, as in many other things, it is easy to be wise after the event. The uncertainty of the dates at which the railways would begin to be productive could not permit of adding indefinitely to the capital accounts.

Still another disturbing element had made it necessary to call for caution in the way of expenditure on railways. The continued fall in the value of silver and the consequent large increase in the cost of remittances to England for the invested capital, was a very disquieting factor in the general financial policy in India, as most of the obligations of India were to England.²

**The limit of expenditure on Productive Works fixed at £2,500,000—
—an unsound proposition.**

The question of further extension of railways was, therefore, seriously affected by this fall in silver, as the

¹ *Report from the Select Committee on E.I. (Public Works)*, July 24, 1879, p. xviii.

² Two important causes contributed to this fall: (1) demonetisation of silver currencies in the Continental countries; (2) further discoveries of silver.

earnings of railways were in silver, whereas the capital payments were to be made in gold. The Select Committee on Public Works in India, which examined the whole question of capital borrowings for all productive works, endorsed the views of the Secretary of State, who wanted to fix the limit of public expenditure at £2,500,000, and disapproved of the system proposed by the Government of India.

The main reason put forward which made the proposals of the Government unacceptable, was that unless the development of revenue was proportionately progressive, the amount of "dead weight" could not remain stationary, but would annually vary, being dependent upon the amount of receipts from the works to which it referred. But as the receipts greatly fluctuated, especially during years of famine, the plan in question could not afford any data on which an opinion could be formed as to undertaking new works. Propositions for new works, made after a year of comparatively good financial results, might be sanctioned, which would be rejected if the results of the same year had been unfavourable, and thus, instead of the determination of the Government being guided by the prospect in regard to the works proposed to be undertaken, it would be influenced by the favourable or unfavourable result in the most recent year of works long previously commenced, and wholly or partially completed. It is only fair to say that no accurate basis for the control of capital expenditure could be found by assigning a certain sum out of the revenues of India, as the limit beyond which no liability was to be incurred. Nor, it is clear, was it claimed by the Government to furnish any such basis. What the Government claimed was that as the railway revenues (barring exceptional years) were increasingly progressive, capital expenditure could be increased as the liabilities for the old lines decreased. A broad estimate of this was not difficult at that stage of experience. As for the suggestion that the Government would be less mindful of the remunerative character of the undertaking and be influenced merely by the results of the old lines, it may be rejoined that the

necessity of further development would have provided sufficient stimulus to avoiding works of a kind which would prove to be permanent burdens. That the undertakings of this nature involve some risk is inevitable. The Government of India, in view of the necessity of further development, was prepared for certain risks.

But however justifiable that attitude of avoiding all risks of throwing some burdens on the general revenues may have been, the imposition of a definite limit to expenditure on public works, whatever their promising nature, was certainly ridiculous. This limit was fixed with a view to keeping the expenditure within the bounds of the sums that could be raised in India, with the entire exclusion of all borrowings in England. The object was twofold: (1) to avoid an increase in the charges for debt in England; (2) political, i.e., that it was found advisable to increase the stake of the Indian people in works of the Government.¹ The maximum which could be expected to be raised in India was £2,500,000. Speaking merely from an economic point of view, the latter consideration has no place. Advisable as at all times it is, and will be, to raise capital within the country, *it must be* raised outside it if the internal resources are small. It is most undesirable that for any reasons India should be shut out from the London money market: "the first central reservoir of capital is England."² As for the exchange difficulties, although they imposed upon the Government the necessity of using caution and of taking into allowance to what extent the remittances on account of interest will be affected by the rupee depreciation, such difficulties could not warrant

¹ Q. 859.—Select Committee on Public Works, 1b, Mr. Fawcett: "The political grounds being the desirability of giving the natives a greater stake in the country, and putting an end to the very mistaken belief that a tribute of £15,000,000 or £6,000,000 is paid annually by the people of India to this country, which is, in my opinion, a misapplication of terms." (The answer was given by Sir F. Seccombe, the financial secretary to the India Council.)

² A certain section of the Indian people have at times criticised the remittances from India as a drain upon India, without discriminating into the nature of a "remittance," whether it was a return for the value of services rendered or not. But the theory has no currency now. It is exploded.

an absolute limit being placed upon capital expenditure. The main problem depends merely on the remunerative or the unremunerative character of the undertaking. If the prospects of certain works were so promising, and it could be fairly estimated that in spite of the depreciation of the returns owing to the exchange, such return would still meet the interest charges, it would be unwise not to spend the amount requisite for the purpose. The recommendations of the Committee on Public Works in India, that no more than £2,500,000 be spent upon the productive works, appears, therefore, entirely misconceived.

The witnesses of the Government of India, especially Mr. Juland Danvers and General Dickens, declared that there were lots of railway lines which with a judicious outlay could pay about 6 per cent.¹

There is still another reason which is likely to have influenced the decision of the Committee on the matter. In the circles of the India Council, opinion seemed to have gained ground that any increase in the public borrowings of the Government would have prejudicial effect upon its credit.² The fears entertained on this point have reap-

¹ Q. 4194, 4195, *op cit.*, 1878. Danvers was of opinion that in future there were favourable prospects of Indian railways, and that the money if judiciously laid out would give a good return. General Dickens, Q. 707-708; see also Q. 30-51, evidence by Danvers to the effect that in many parts of India there is room for branch lines of railways calculated to yield 5 or 6 per cent.: *ib.*, 1879.

² The Public Works Committee, 1879, *op. cit.*, Q. 651.

Sir George Campbell: "Then I would ask you whether it has occurred to you to consider the view, which I think has been often presented to the public, that is to say, seeing that our colonies and almost every other country in the world receive free supplies of British capital, why under those circumstances would you prevent India from receiving a similar supply of capital from this country?" Sir F. Seccombe: "India has received an immense amount of English capital within the last thirty years, and, like the case of an individual improving his estate, there might be many things which would pay him very well to have done; many improvements might be made, but he would have to obtain the money for the purpose of executing them at too high a cost. Indian credit has stood very high for many years, and it has been second only to that of the British Government. A change, however, has now occurred, and I think, unless great care be taken with reference to increasing the amount of Indian securities in India as well as in England, you will find that the rate of interest for money borrowed will be such that it would be very undesirable to construct public works under the expectation that they will be commercially remunerative." (Sir F. Seccombe was the financial secretary to the Secretary of State.)

peared several times whenever the question of the State undertaking the construction of railways has been discussed. That these fears were entirely groundless is shown by the fact that in spite of the large borrowings of the Indian Government in the London market, the selling price of the Government securities was not at all affected. Writing in 1881, about the baseless clamours for the reduction of the Indian debt, Sir John Strachey and his brother expressed themselves thus :

"How little the credit of the Indian Government has been affected by the clamours of the past year or two is sufficiently demonstrated by the fact that the issue price of the loan issued in Calcutta in the spring of the last year . . . was actually higher than the market price immediately before : and the success of the Secretary of State's $3\frac{1}{2}$ per cent. loan, which immediately rose to a premium, points to the same conclusion."¹

It was rightly contended by them that the fluctuations to which the value of Government loans were subject were mainly dependent upon the varying rates of interest in the money market, and the rates of exchange between India and England. The results were altogether opposed to any idea that the markets had been overweighted with Government securities either in England or in India. This view is supported by actual figures which show that the increase of 60 millions of debt since 1869 to 1880 was mainly on account of productive public works. This debt is fully distinguishable from debt for which no return could be obtained or hoped for. As such a debt does not involve the necessity of either reimbursement or a charge for interest, but yields a direct profit to the debtor, it is "as little rational to describe the capital outlay on the railways of Great Britain as a grievous burden on this country, as to speak of the similar investments in India as a danger or an evil."²

The Acworth Committee makes similar observations on this point ; they shall be adverted to later.

¹ *Finances and Public Works of India*, by Sir John Strachey and Lt.-Gen. Richard Strachey, 1882, p. 127.

² Cf. *ib.* p. 116.

The only effective method of control over expenditure of the nature involved in the construction of railways, lies not in the adoption of a restrictive policy, but in planning out such a self-acting system of check as will throw back the effects of ill-considered and unsuccessful expenditure upon those who are responsible for originating them. Provision of a plan on such lines was in the minds of the two famous Strachey brothers. But their plan was based more on an expansion of provincial financial authority, i.e., that the provinces should be authorised to undertake works out of borrowed capital, with a limitation that they should not charge the revenues by reason of interest beyond a certain figure : " that limit being reached, outlay should be stopped until by an increase of income or reduction of expenditure an available margin had been restored." In this way it was hoped that, the whole of the charges and income of the works being localised, the provincial revenues would reap the advantage of economy and good management. On the other hand, the consequences of ill-considered expenditures will immediately recoil on their shoulders. But such a plan is attended with serious inconvenience. Financing of railways is more effectively and economically done through a central agency. The plan which would have been more effective would have been to throw the entire responsibility for the financing of the railways upon the Public Works Department of the Government of India, with or without an advance of a certain sum which was to be a charge upon the revenues of India. The responsibility for the financial results of immature schemes would have immediately made them more cautious in the origination of new projects.

Instead of some such arrangement being made, the restricted policy of the Secretary of State was adopted and the Government of India was ruled out.

The whole incident connected with the divergence of the views of the two governmental bodies for India furnishes an interesting illustration of the unwisdom of too close an interference with the Indian Government by the Secretary of State, and his Council. Lord Lawrence had already in

1869 protested strongly against the inconvenience and the unsoundness of such interference in strong terms, and his words in this connection may be quoted here with profit :

"The power exercised in England over affairs actually conducted in India should surely be essentially one of control, and *the initiation and practical direction* of measures should as far as possible, remain in the hands of the Indian Government. . . . I must ask permission to state my opinion in plain language on this very important point,—to the effect that the true interests of India demand that the Secretary of State's direct action in relation to Indian railways should be exercised only so far as is essential for the prompt despatch of that part of the business connected with them which is necessarily carried out in England ; and that, beyond this, his intervention should, as a rule, be limited to the control of Indian authorities, on whom should be placed the same complete responsibility for railway management, both in respect to administration and finance, as is placed on them in all other branches of public business. I feel in the strongest manner that real success in the economical and efficient management and extension of railways in India can only be attained by the frank adoption of this policy."¹

The machinery of the Government for the construction of railways.

The second point which remains to be noticed is the machinery employed to carry through the construction and administration of railways. Up till 1869 the only require-

¹ Lord Lawrence's Minute of 1869, op. cit., para 27. The observations made here were no doubt made mainly with a view to protesting against the Secretary of State's yielding to the pressure of companies to alter terms of contracts entered into by them, whenever they were found to be disadvantageous to them, or allowing the companies certain items of expenditure although disallowed by the Government of India. This same state of affairs provoked the following question by Sir G. Campbell during the sessions of the Committee of 1884. Referring to the guaranteed companies he asked General Strachey, who appeared as a witness, "whether you have not generally found that companies that deal with works in India, having their headquarters in London, proceed upon the '*heads I win, tails you loss*' principle ; that is to say, if they get a profitable thing, either they do not hold on to it, and try to make the very utmost of it without regard to the benefiting, or otherwise, of the people in India, and whether if they find that they are likely to make a loss, they do not throw it back upon the Government of India, and insist upon being compensated and recompensed out of the finances of India ?"—That is perfectly true. I agree with every word of it. . . . The words of Lord Lawrence are thoroughly applicable to the instance of interference we have spoken of. The Government of India was in a much better position to view the nature of their obligations and their effect than the Secretary of State."

ments of the Government, so far as it concerned the construction of railways, were a few consulting engineers to supervise the works of the guaranteed companies. These were generally attached to various provincial Governments. There was no need of a central organisation to take charge of the railways. But when the State started to construct the railways directly, it was necessary to put their house in order. The Government of India was anxious to centralise their services. It was proposed by them that the consulting engineers for the guaranteed line should all come directly under the orders of the Government of India. A consulting engineer for State railways was appointed in 1870.¹ The direction for the new lines was to a large extent entrusted to him. For the execution of general duties a Director for State Railways was appointed. The work involved was heavy, being not only the initiation and organisation of the department itself, but supervision and control of works spread all over the country. With the further expansion of the operations, some enlargement was inevitable. The Government of India wanted to increase the number of directors and place them in charge of one system each, and for this purpose divide the country "into systems." But the India Office did not approve of this plan, and ultimately a Director-General was appointed, with a deputy and assistants for certain branches of work. His duties were combined with those of a Deputy Secretary to the Government of India in the Railway Branch of the Public Works Department. As a Director-General he was an independent executive officer, and as a Deputy Secretary he was the agent of the Government of India, "and thus not infrequently corresponding with himself as Director-General, and controlling and even criticising his action."² At this time it was thought that the arrangement would be only temporary; that the State lines would be delegated

¹ The first incumbent was Sir Gilmford Molesworth, who remained ever after a strong advocate for State agency for railways.

² A similar position was occupied by Bismarck when, as Prime Minister of the German Reich, he corresponded with himself as a Prussian Minister. One virtue of this arrangement was that it led to a rapid disposal of business. Its anomalous working is apparent.

to the local Governments to be worked, and that the Government of India would be thus able to lighten its duties and relieve the Director-General of many responsibilities. The main idea which actuated these suggestions was the need of decentralisation. Although this need was real, yet the unwisdom of decentralisation of railways on provincial lines needs hardly any demonstration. The necessity of withdrawing even the supervisory functions from the provincial Governments reasserted itself after a very brief experiment.¹ Another change in the administration of the Public Works Department which affected the railways was the fact that a new member was added, in 1874, to the Council of India in the exclusive charge of this portfolio, which was so long held by another member along with some other duties.²

One more point connected with this period may be noted, and that is the acquisition of one of the important guaranteed lines in 1879, viz., the E.I. Railway. The policy of the day was merely to own the railways and lease them out to companies for management. After the expiry of twenty-five years the Government exercised its right of purchase. It was noticed while discussing the terms of the contracts with the old guaranteed companies that the clauses relating to acquisition admitted of several interpretations. In spite of it, no legal advice was taken, and the terms most favourable to the companies were agreed upon by the Secretary of State. The Select Committee which examined the Bill found themselves forced to make a special report.³ According to the terms of the new contract the old Guarantee debt against

¹ *Railway Policy in India*, by Horace Bell, 1894, pp. 103-9.

² *Public Works Committee Report*, 1879, op. cit., p. vii.

³ As the two contracting parties, the Secretary of State and the companies, were both agreed upon the terms incorporated in the bill, the Select Committee could not alter the terms of the new contract. In their special report, however, they remarked that they had received no proof in evidence that the conclusion of a satisfactory arrangement with the company would have been incompatible with a closer adherence to the terms of the contract. Three of the six members wanted to add that the prospect of possessing an interest in the substantial prosperity of the line would not have required other favourable conditions to be added in order to commend it to the acceptance of the shareholders of the company. See Draft Report by Campbell-Bannerman. Select Committee Report on the E.I.R. Bill June 13, 1879.

the company was cancelled. An annuity of £5 12s. 6d. was given to the stockholders in lieu of their stock, worth £125. A certain portion of the annuities was allowed to be deferred, and the holders thereof formed a new company for the purposes of management. Their share was one-fifth of the total capital outlay; and this share was guaranteed at 4 per cent., together with one-fifth of the share of the surplus profits. The payment of the guaranteed interest and the surplus profits was to be calculated at the current exchange rate instead of being payable at the rate of 1s. 10d. a rupee. The terms of purchase, however, have been criticised as too favourable to the companies. But it must be admitted that this company has shown itself very efficient in management. Whether it would have been wiser to adhere to a stricter interpretation of the contract, and possibly lose the services of this agency, is a question which must be decided in considering the relative superiority of State management or company management. The right of acquisition in case of the other old guaranteed lines was abandoned in lieu of a right of the Government to share a moiety of the surplus net profits. But this was done without consulting the Government of India in the matter, and the latter only put in a protest when it was too late. When the Government of India was apprised of the decision they wrote back to say that there was no apparent object to be served by making concessions. The credit of the Government never was better; the undertakings of these companies were approaching completion, their demands on the money market had almost ceased and their stocks were quoted at a considerable premium. They added:

"It is therefore in vain that we seek to discover the grounds which have actuated Her Majesty's Government in this matter; and looking at the stage at which it has arrived, as evidenced by the interpellations in Parliament, we cannot but regret that no opportunity was afforded to us of placing your Grace in possession of the views we entertain on this matter."¹

¹ Correspondence between the Indian Government and the India Office, reproduced in H.C. 221, June 17, 1874, p. 4.

SECTION III—1882-1922.

The limitations which had been imposed upon the Government of India not to expend more than £2,500,000 a year out of borrowed capital on productive public works necessarily meant a slow growth of railways, if the State alone was to construct them. But the Famine Commissioners in 1880 laid great emphasis upon the importance of extending the railways in order to protect the people from the ravages of famine. Actual experience, both of the enormous value of the works, and of the possibility of carrying them out without causing any permanent financial charge, it was claimed, justified them in expecting the Government

"to continue to provide the country, within prudent but sufficiently wide limits, with extended railway communications and irrigation works, which are the best, and often the only, means of securing protection from the extreme effects of drought and famine."

The Government of India was greatly impressed by the gravity of the situation and the importance of extending the railways. But obviously this could not be done without enlarging the powers of the Government or enlisting private enterprise in some shape or other. In the case of railways, avowedly of an unremunerative character, but which were most urgently needed for the relief of famine-stricken areas, the problem was still more difficult. These could not be expected to be built by private enterprise out of sheer philanthropic motives. The duty of the State to provide means for these was therefore quite clear. But, as it will be remembered, the Secretary of State precluded the Government of India from undertaking works which were¹ unpro-

¹ In the case of railways the construction which was given to the expression "within reasonable time" brought only those railways under the category of productive works which, within a maximum period of five years from the date of lines being opened for traffic, were estimated to pay 4 per cent. on the capital invested, including therein all arrears of simple interest incurred up to that date. In the case of irrigation, greater latitude was given. The period extended to ten years from the date of completion of the work. As for protective works, they were those which although not directly remunerative to the extent which would

ductive in the sense of promising returns within reasonable time, and these works were also to be limited to such only as will involve no more than an annual expenditure of £2,500,000. For the railways which were needed for the purposes of protection from the effects of famine and would not be justified commercially, the only amount available was £500,000 per annum, which was to be so appropriated from the Famine Insurance Grant. This allotment originated in the belief that "protective" railways would prevent a probable future outlay in the relief of the population when famine actually occurred. But the amount was too small for any appreciable progress in the construction of such railways. In view of these restrictions, both as to the amount to be borrowed and the stringent conditions as to the remunerative character of the largest portions of the works to be undertaken, the only way in which the Government of India proposed to get out of the difficulty was to invert the regulations then in force, to apply the loan funds which the Government was permitted to raise to protective railways, and leave to private enterprise all such lines as were profitable to attract it. For this purpose two schedules were caused to be drawn up: Schedule A, which contained "a list of the railways indispensable for protective or other urgent purposes, to be completed or made by the State or other agency on its behalf"; Schedule B, containing a list of railways to be left to private enterprise. Briefly, then, the cornerstone of this policy was the exclusion of the action of the State altogether from the field of productive enterprise, and its confinement merely to those railways which from their unprofitable character could not be made by private agencies.

Obviously the only justification for such a distribution of the railway field was to be found in the need for a speedy construction of railways urgently required for protection against famine. This point was emphasised by the Govern-

justify their inclusion in the class of productive works, were calculated to guard against a probable future expenditure in relief of the population. The latter had to be constructed out of revenue, while the former could be built out of borrowed money. See Despatch to the Government of India, January 6, 1881, paras. 8-12.

ment of India in their letter to the Secretary of State dated September 24, 1883, in the following words :

"We are impelled to use this private agency, without any intention of entering on a discussion of its abstract merits in comparison with State agency, by the fact that only by enlisting it in addition to the latter can we hope to provide for India with speed the railways she requires."¹

But a moment's reflection is sufficient to show the unsoundness of such a proposition. The more a Government is obliged to shoulder the burdens of non-paying lines the greater is the necessity imposed upon it of holding in its hands lines which offer good returns in order to be able to set off the losses arising from unprofitable ones. This point had indeed received the attention of one of the executive members of the Government of India. In his Minute dated July 26, 1881, the Hon. Rivers Thompson wrote that for the construction of lines offering fair remunerative prospects in the interests of India it would be advisable that the State should reserve such lines absolutely in its hands.

"I should not be prepared to admit the wisdom of a policy under which the Government should make over all its carefully selected paying lines to private enterprise, and construct all the unproductive lines by State agency. Rather than this, and for the benefit of the Indian taxpayer, I contend that it would be much better that Government should keep the construction and management of all lines in its own hands, so that the profits from the good lines may be taken as a set-off to the losses upon the bad ; while if all railways in India are eventually to be profitable—a possibility which all recent returns would apparently justify—the retention of such a property in the hands of the State seems to me, in the financial position of India, to be of the greatest importance."²

The last part of the quotation gives one an idea that the author, contrary to all principles of *laissez-faire*, was not afraid to regard the State even as a fiscal organism which

¹ See the correspondence between the Secretary of State and the Government of India—1881-4—reproduced in the Appendix to the report from the Select Committee on E.I. Railways, 1884. Cd. 225, pp. 488-568, quotation from page 555.

² Minute by the Hon. Rivers Thompson, July 26, 1881.

like private individuals might even enter a commercial sphere with a view to profit-making. But whatever the strength of opposition to the entry of the State into a sphere which could be adequately served by private individuals, it loses all its force when the satisfaction of public needs cannot be relied on, by merely depending upon private enterprise. Under such circumstances no State can be reproached with being mercenary if, in order to counter-balance the losses on poorer lines, it takes over also the lines which promise to yield commercial returns. There were still two other reasons which influenced the judgment of an important member of the Indian Government, Sir E. Baring (Lord Cromer). They are worth mentioning. As one steeped in the theories of the Individualistic School, Lord Cromer held that if the profits "were left to fructify in the pockets of the people," they would be more advantageously employed than if they were paid to the State, with a great chance of their being swallowed up in unproductive expenditure.¹ This criticism is not without an amount of truth. Indeed the critics of the Afghan wars and the frontier expeditions might well clutch at this argument to show the inadvisability of leaving surpluses at the disposal of a Government, which might be encouraged thereby to run into vast expenditures on military adventures. But this argument abates a great deal of its force when applied to the times when Lord Cromer wrote. The Government was pressed on all sides by urgent demands for extension of railways for protection against famine. The urgency of saving lives was fully realised by the Government; protective lines had a paramount claim on it. Still another reason which inclined Lord Cromer to the enlistment of private enterprise was that the Government of India had no extraneous advice on the character of the projects undertaken by the Public Works Department. This fear also was not baseless. The zeal of the Government officers, and their anxiety to have their names connected with several projects of construction, might often lead them to advise the construction of lines which subsequent experience might prove

¹ Financial Statement in March, 1881.

to be financial failures. Both the arguments, however, admit of an effective rejoinder. The objects in view could be achieved not by parting with the lines of a remunerative character to private enterprise, but in the establishment of a separate railway administration with large financial powers and responsibilities, so that it can always be guided by its financial results, which are bound to act as an effective brake to the undertaking of wild schemes.

Reverting to the proposals of the Government of India, it should be noted that under Schedule A, which contained protective lines, a variety of cases presented themselves, varying according to the remunerative character of the particular undertakings. Any railway, it may be assumed, even though avowedly of a protective nature, will, to a certain extent, pay some percentage on the capital laid out in its construction. The proposal of the Government of India was to entrust the construction of those which promised fair prospect of being remunerative, not immediately but still in the near future, to companies under guarantees of a limited period, and on a fixed amount of capital. For this purpose it intended to make use of part of the Famine Insurance Grant, to serve as a guarantee against payment for the interest charge of the capital laid out in their construction. The rest of the protective lines were to be built through the direct agency of the State.

The policy of the Government of India as sketched above did not, however, meet with the approval of the Secretary of State. The latter was not willing to permit what was deemed to be too great an expansion of the railway operations. Ultimately a Select Committee was appointed in 1884 with a view to inquire into the necessity for more rapid extension and the means by which this object may be best accomplished. The Committee reported upon the conclusive evidence in favour of a more rapid extension of railway communication, and expressed their opinion that the amount proposed to be spent upon the railways by the Government of India was moderate. But they could not agree either to the hypothecation of a part of the Famine Insurance Grant as a sum to pay the guaranteed interest on the limited guaranteed

companies, or to the proposal that there should be an entire removal of the existing check upon the construction of unremunerative lines. Although it was recommended that the technical distinction between protective and productive lines could not be maintained, it was at the same time held that the bulk of the lines made should be self-supporting. Considering the means by which the extension of railways could be accomplished, although it was admitted that the money could be raised more cheaply by the State, yet the Committee was of opinion that the employment of companies would relieve the Government of the necessity of an increase of the Staff of the Public Works Department. The employment of both agencies was, therefore, held to be desirable. It was considered impossible to form any definite conclusion as to the amount of money which with safety to the finances could be annually borrowed for the construction of railways. While, therefore, recommending that the old limit of £2,500,000 for the Public Works could be safely enlarged, they thought that the full responsibility of deciding upon the amounts to be borrowed from year to year should rest with the Secretary of State in Council. The Committee emphatically endorsed the declaration of the Government of India that the proposed extension of railways should not involve additional taxation. The recommendations of the Select Committee of 1884 have been followed in the main, in subsequent years. The construction of railways in India was continued for several years under the policy recommended by the Select Committee. But the terms under which the services of companies have been employed have been modified from time to time.

One seeks in vain for any serious reason which should have necessitated a change in the policy which had been inaugurated by Lord Lawrence in 1859. If the object was a quick expansion of railways, it could have been equally well achieved by enlarging the powers of the Government of India. The relative merits of the problem of direct state and company operations were not sufficiently well considered. The change was brought about under a sort

of vague and ill-defined reasoning, sometimes taking the form of a belief that under this mixed system there would be a healthy emulation, at others that the responsibilities of the State should be minimised. The gravest of the defects of the new move of the Government was that it was a policy of drift without any definite arrangement or system. Unlike France, new lines were given over to companies without laying out a "sphere" for each within which new developments might be demanded. The dangers of such a policy is apparent. Any very small line may occupy a very productive area, with the result that later it cannot be forced to extend itself in an area less productive.¹

As it turned out, the great hopes which had been entertained about private enterprise being attracted to this fruitful field of railways, where it was hoped the profits would fructify and return to the same field, were only poorly realised. The Bengal North Western and Rohilkund Kumaon railways were the only important companies which were started without a Guarantee. The leasing of the Tirhut State line materially contributed to the success of the former. The rest of the lines started without a Guarantee are of relatively small importance.²

The proposals for enlisting private enterprise under a limited Guarantee also never materialised. Indeed, at first, when the Bengal Central Railway was started under this form of Guarantee, it looked as if the example would be followed by others, but very soon it was realised that a Guarantee was

¹ This fear has been always present in the minds of the French people, and the French Government succeeded in making arrangements by which this difficulty has been avoided, by parcelling out the country in six big réseaux.

Cf. the remarks of M. Colson in his book, *Cours d'Economie Politique* : " Au point de la construction des lignes neuves, dont la plupart doivent nécessairement s'encadrer dans les réseaux pré-existants, les compagnies n'entreprennent volontiers que celle qui, soit par leurs recettes propres, soit comme affluents, doivent fournir une augmentation de produit net en rapport avec la dépense. Or, nous avons vu que les lignes qui laissent un certain déficit, pourvu qu'il ne soit pas trop fort, rapportent à l'ensemble de la nation plus qu'elles ne lui coûtent ; la nécessité de traiter avec les compagnies, pour les leur faire accepter, de leur accorder pour cela des subventions difficiles à chiffrer équitablement, est un réel inconvénient " (p. 374).

² But both the lines were given land free of cost, and the latter was given a subsidy for each mile for a number of years.

almost a necessity for the success of a company in India. The terms of the Contract had to be altered, and instead of a limited Guarantee until the opening of the line, the Guarantee had to be permanent. In 1882 a contract was entered into with the Southern Mahratta Railway. Under the terms of the contract the company practically acted as agent for the Government, receiving a Guarantee of $3\frac{1}{2}$ per cent. plus one-fourth of the net receipts during the currency of the agency. It was to raise £3,000,000. All receipts of the company, exclusive of the interest payable on the capital raised by it, were to be paid into the Government treasury. Of the net earnings, three-fourths were to be taken by the Government, and one-fourth by the company. It must be noted that the net earnings were calculated without deducting the interest charges on the capital share of the Government. This was a very serious error. The company, while interested in keeping down revenue expenditure so as to make their receipts as large as possible, had no inducement to keep down capital expenditure. Subsequently, contracts were entered into with the Indian Midland (now incorporated with the G.I.P.) and also the Bengal Nagpur, on similar terms, with this difference, that the net profits were to be arrived at after deducting the capital charges of both the Government and the companies. The serious error of the contract with the Southern Mahratta was thus avoided. The Guarantee, however, was fixed at 4 per cent., $\frac{1}{2}$ per cent. higher than that of the Southern Mahratta Railway.

Evidently there was no financial advantage to the Government by the employment of companies under the terms laid down in the contract. The Government of India had always protested against an absolute Guarantee being granted to companies, but in fact the new companies had a real Guarantee. From the very commencement the property in the railways belonged to the Government. In reality the employment of the new companies could be justified only as a measure to secure economical working of the railways rather than as instruments to relieve the Government from the financial responsibilities of the undertakings. This point was emphasised by the Government

of India when in 1889 the Secretary of State addressed the Government of India on the expediency of enlarging the scope afforded by the railways in India for private enterprise. It was proposed that a company may raise one-third of the cost of a line, the remainder being advanced by the Government of India, the interest on the company's share being guaranteed at 3 per cent., then the Government's share of capital to be paid at a similar rate, after which the company and the Government were to share in the surplus, in proportion to their respective shares. This arrangement did not materially differ from the arrangement with the Bengal Nagpur and Southern Mahratta Railways. The Government of India expressed themselves as unable to agree with the proposals for the creation of companies

"which would have a very limited interest in the concerns from which they take their name . . . on absolute security, and which for the rest of their capital would have to draw from the Government Treasury funds in the management of which the State could thereafter have but little influence, and from which it would probably get a very poor return. They considered that rather than raise funds in such a way, for expediting railway extension, it would be better and safer to increase the borrowing powers of the Government of India. . . ."¹

The South Indian Railway, the contract for which was revised in 1890, was entrusted to a company under the terms suggested by the Secretary of State. It must, however, be recognised that if for some reason or another direct State agency for purposes of management was decided against, the terms of the contracts with the latter guaranteed companies are not at all unsatisfactory.

By the nineties of the last century, it was felt that some branch lines which were really extensions of the main lines could be built with good certainty of profits. The natural agencies for the working of such lines are the administrations of the main lines. Their construction also could be more simply carried out through the main lines than by a separate agency.² But, regardless of this fact, a number of

¹ Horace Bell, *op. cit.*, pp. 50-5.

² It will be recalled that in Prussia Nebenbahnen (branch lines) were first proposed to be built by separate agencies of companies. It was soon

branch-line companies have been started to carry out the extensions. They are generally entrusted to the main lines to be worked under rebate or Guarantee terms. The first move in this direction took place in 1893, when the companies were offered a rebate on the gross earnings of the traffic interchanged with the main line, so that the yield may be 5 per cent., but the rebate was limited to 20 per cent. of the gross earnings. The chief object in resorting to this method of assistance was to escape the responsibility for a gold liability, as silver then touched a very low water mark, and it was not clear if the depreciation would not go farther still. But the terms were found to be not sufficiently attractive, and in 1896 revised terms were issued. An absolute Guarantee of 3 per cent., together with a share of surplus profit, or rebates up to the full extent of the main line's net earnings, in supplement of their own net earnings, so as to make a total of $3\frac{1}{2}$ per cent. on the capital outlay, was offered.¹ The Guarantee was in rupees on the capital as entered in rupees. The Government retained the right of purchase after 21 years. These terms have had to be modified time after time, in order to make them sufficiently attractive to appeal to the market. In 1913 the Government of India issued a new resolution modifying the terms. They expressed themselves as willing to consider offers for the construction by the agency of private companies of branch lines, with the assistance in the shape of a Guarantee of interest or a rebate to the branch line. The Guarantee offered was $3\frac{1}{2}$ per cent. on the approved paid-up share capital of the company, subject to the condition that all surplus profits which may be earned by the company, after paying interest on the paid-up share capital at the rate of 5 per cent., shall be equally divided between the Government and the companies. When the branch line connects with a railway owned and worked by the State, the Government of India were prepared to allow the company, by way of rebate, such a sum, not exceeding the net earnings* from realised that the State as the owner of the main lines was the only proper agency to carry out these extensions. Almost all the branch lines were constructed by the State.

¹ *Imperial Gazetteer*, Vol. III, 1907.

traffic interchanged between such State railway and the branch line as should make up 5 per cent. on the capital. When, without the assistance of the rebate, the net earnings of the company suffice to pay 5 per cent., the Government was entitled to an equal share in the surplus. These terms, once again, in view of the rise of the value of money, have had to be revised, if they were to appeal to the confidence of the investing public.

That the procedure of raising money in this form is extremely cumbersome requires hardly any demonstration. The only advantage claimed for it is that in this manner money is obtained from local sources, which could not be tapped by means of a direct Government loan. But this advantage is more imagined than real. The classes of people who are thus interested in subscribing towards the capital are the people directly concerned to have the construction of the railway secured, viz., industrialists, or agriculturists in the locality. If their contribution was of much value it could as well be secured by the Government making it incumbent upon that locality to subscribe towards the necessary capital, before they undertook to construct the lines. The limited market which the issue of securities through the medium of a small company commands naturally militates against the popularity of such issues.¹ The multiplication of several agencies is another evil. As the branch lines ultimately are worked and must be worked by the main lines, the only services which the branch-line company can render are the raising of funds and the construction of the line. Both these services, implying as they do the creation of "a separate construction staff and a separate Board of Directors and separate accounts," will be rendered at much greater cost than if they are done by the main lines. The formation of such branch-line companies is very rightly characterised as "a fifth wheel to the coach."² The cumbersomeness of this procedure was also

¹ Cf. the disadvantages of the employment of small companies for the raising of money as enumerated by M. Colson in his book, *op. cit.*, p. 458. One of the disadvantages mentioned is *l'étroitesse du marché*.

² Cf. Acworth Committee's Report, 1921. Cmd. 1512, pp. 56-7.

recognised by Mr. Thomas Robertson,¹ who amongst other points had to report upon the feasibility of a systematic plan of railway development in India.

Thus, with the exception of about 2,500 miles built by assisted enterprise, the railway mileage in India has grown under various forms but really with the financial risk resting with the Government. The guaranteed railways are in fact indistinguishable, so far as their financial liability is concerned, from those that are undertaken directly by the State. The growth of the mileage (including the native state lines and the assisted lines) is indicated in the following table :—

Year.	Total.	Assisted Lines.	Native State Lines.	Branch Lines, Companies' Railways.
1885 . . .	12,376	653 ^a	687	
1890 . . .	16,404	654	1,170	
1895 . . .	20,111	808	1,560	
1900 . . .	24,707	2,235	2,873	
1905 . . .	29,097	2,629	3,468	
1910 . . .	32,099	3,669 ^a	3,852	
1915-16 . .	35,833	2,639	4,643	1,938
1919-20 . .	36,735	2,614	5,179	2,134

As compared with the earlier period, the growth of the mileage of railways has been relatively quicker than in the earlier period, but it has not kept pace with the requirements of traffic. Indeed, it is impossible to lay down with certainty a definite figure which should be arrived at for attainment. The economic development of the country alone will decide this figure. The Mackay Committee, referring to the evidence of witnesses who expressed their opinion that 100,000 miles might reasonably be reached, remarked that even that estimate of mileage was short of that which would ultimately be found necessary in

¹ He was appointed Special Commissioner to investigate the railway situation in India and issued in 1903 his report on the Administration and Working of Indian Railways. See para. 149.

^a This includes also the mileage of the Bengal Central Railway, which, on the alteration of the terms of the contract in 1887, was included in the category of State lines.

^b Until 1905 the branch-line companies' railways, under rebate or Guarantee terms, were included amongst the assisted lines.

India. In a general way, the observation is perfectly true.

Although this view has been held by many competent persons, yet India presents a curious spectacle of a country where private enterprise has persistently refused to be attracted to "the fruitful field of reproductive expenditure."

"We are not aware," observed the members of the Mackay Committee, "of any case in which true private enterprise, that is the construction of railways without financial assistance from the State, has ever failed to receive encouragement from the Government of India, provided that the proposed undertaking was one which would not enter into injurious competition with existing lines."

From the review of the past history of railway development in India, one thing more than anything else is clear, that the rejection of railways by private enterprise is no test for the rejection of railways in that country. From all sides, evidences are clear that the railway construction should be speeded up.

The methods open to the Government are, either direct construction by its own agency, or through guaranteed companies. So far as financial responsibility is concerned one derives no advantage by the employment of companies. Financial liability is not any the less when the Government guarantees a safe return to the companies than when it has to pay directly interest charges on its monies raised. If past experience is to guide us, it must be remembered that even when a company is started without a guarantee, the Government should be prepared to come to the assistance of the company if the undertaking fails to obtain the confidence of the investing public. The necessity of such assistance is all the greater when most of the capital has to be found outside the country, and if a regular flow of this capital towards India is to be maintained.

As a matter of fact, borrowings through guaranteed companies has always proved more expensive than direct borrowings. In all roundabout affairs ultimately one has to pay more than if a thing is done directly. Mr. Robertson ¹

See Robertson's Report, op. cit., p. 45.

recognised this fact. So did the Mackay Committee. They clearly expressed themselves on this point, that the raising of capital through the medium of companies, either in the form of companies' debenture stock or guaranteed share capital, with a share of surplus profits, was more expensive than direct Government stock. With regard to the issue of guaranteed shares it was pointed out that there was one advantage about it, inasmuch as it appealed to a different class of investors. But its expensiveness naturally makes its use advisable when direct Government borrowing powers only are wholly exhausted. It is rightly pointed out by the majority group of the Acworth Committee that the Indian Government can readily find a market for their loans if they wish it and are willing to pay the market price.¹ Their argument is supported by the experience of the Commonwealth and State Governments of Australia with a population of hardly one-sixtieth that of India, which have been able to borrow twice the amount that the Indian Government has raised, with the added difference in favour of India that the proportion of non-revenue-earning capital to revenue-earning capital in the former is greater than it is in India.²

It may be now necessary to consider why, in spite of the obvious expensiveness of the guaranteed companies' agency, Mr. Robertson recommended the extension of this agency. There were three reasons put forward: (1) that the money borrowed by Government was liable to violent fluctuations, on account of the exigencies of the State; (2) that it left every one in uncertainty as to what would be available for expenditure in the next year; (3) that that made a comprehensive programme of outlay impossible. In fact they are only three different aspects of one difficulty, viz., dependence of all new expenditure for expansion of railway facilities on the general Budget of the country. Briefly, the remedy will lie in making borrowings of the Government dependent not upon the temporary exigencies of the

¹ The majority group included Mr. Tuke, who, as one of the directors of Barclays Bank, was fully conversant with the conditions of the Money Market in London.

² See p. 69, Report of the Acworth Committee, 1921. Cmd. 1512.

Budget but upon the productive or unproductive nature of the undertaking proposed to be taken in hand ; in other words, in ensuring a commercial consideration of every new capital expenditure. Mr. Robertson seemed to be of opinion that the difficulty was inseparable from direct borrowings by the Government. If it was really inseparable, then it would be much better that India should have dearer railways than no railways at all. But the proposal of inducing private capital through guaranteed companies is not so simple as it may appear. If a fixed minimum return to the investor is a *sine qua non* to inducing him to subscribe share capital to any new project, it is evident that the liability of the Government, in case of the additional capital not yielding that additional return, is not unreal. It is impossible that the Government could be expected to let such additional capitals be raised without its deliberately considered sanction. Under the circumstances, it appears that the formation of guaranteed companies with unrestricted powers of raising capital is an impracticable proposition. For the hastening of the progress of railway construction, one has therefore not to look to mere interposition of companies but to the adoption of a bold policy of finance by the Government.

In connection with the employment of companies, there is one more point (raised by Mr. Robertson), to which reference may be made. He recommended the agency of companies also on the ground that they possess the advantage of being able to raise money, with a proper deposit paid at first, and the certainty of getting the balance as it is wanted. The manifest virtue of such a system is that the influence of bad conditions of the money market can be warded off. The end in view, however, can be equally achieved by raising larger Government loans in periods of easy money than are warranted by the actual needs of the day.

If the propositions that the agency of guaranteed companies is more expensive, and that any appreciable extension of railways through such companies, speaking from a practical point of view, is almost impossible without due

consideration and sanction from the Government, be held true, then the root of the problem lies in the devising of such a scheme as will enable the Government to see the commercial possibilities of railway development in their proper perspective. In order to achieve this object the Acworth Committee have recommended the separation of the railway Budget from the general Budget of the country. Viewed merely from the point of view of railway development, the necessity for this separation is not weakened a jot if railway profits are to continue to be utilised for the relief of general taxation. If the practice of using profits as a source of revenue did continue, the utmost charge that could be levelled against the Government will be that it is proving itself to be too commercial. As railway development in India is not yet sufficiently advanced, there is good reason to hold that if the general revenues cannot bear the additional charge for the railways, they should at least cease to look upon railways as a source of revenue. The necessity of extending the benefits of railway communication to all parts of India, in order that disparities in the economic development of the various parts be as far as possible reduced, should impose a duty upon the Government to use the profits in the development of railways in the backward parts. There is a great deal of wisdom in the phrase, "Let railways breed railways."¹ Be that as it may, the present charge against the Indian Government goes far deeper. In comparatively recent years the Government has failed not only to take a general economic point of view, but to take a commercial point of view, i.e., it has failed to supply capital even when there has been a possibility of turning every pound into twenty-one shillings.

"How much the economic development of India," observe the members of the Acworth Committee, "has suffered, not from hesitation to provide for the future—no attempt has been made to do this—but from the utter failure even to keep abreast of day-to-day requirements of the traffic actually in sight, and clamouring to be carried, it is impossible to say."²

¹ See the minute by T. C. Hope, dated January 20, 1883.

² The Acworth Committee's Report, op. cit., p. 27.

The blunders of the Government in this respect are an inevitable result of an attempt to regulate railway expenditure with reference to the ways and means of the year. The railway policy is affected by every change in the state of the Treasury. Hesitation and vacillation, fits of energy succeeded by suspension of work, variations in the allotments, have characterised the activities in the railway field. The allotments vary not only from year to year, but are often subject to sudden cuts during the currency of the year. Money which remains unspent by the railway administration at the end of the year lapses to the general Treasury. The system of "lapse" often leads to extravagance and waste of money by officers who, in fear of losing the amounts if unspent on March 31 of each year, rush into hurried and ill-considered expenditure. The evils of such a system for the administration of a commercial undertaking are patent. There is not only absence of continuity in the affairs of the undertaking, but "a demoralising uncertainty" in its operations. The evils of the system are clearly explained in the recent report of the Acworth Committee.¹

Such a system stands in need of radical reform. The essence of this reform, as is aptly pointed out by the Acworth Committee, lies: (1) in the separation of the railway Budget from the general Budget of the country; (2) the emancipation of the railway management from the control of the Financial Department. The reason for such a separation is given by the Committee in these words:

"Its (Finance Department) officers are not qualified either by training or experience to judge the essentially commercial and technical question where and when the circumstances of a railway undertaking justify bold expenditure of large sums, having regard not merely to the actual conditions of the physical machine at the moment, but to the prospects of development and the requirements of the future."²

¹ See Chapter III, Report of the Acworth Committee, op. cit.

² *Note*: The remedy suggested is not a new-fangled idea, even in the history of Indian railways. It dates back to 1883, when Mr. T. C. Hope became the first Public Works Minister. It was revived in 1899 by Colonel Gardiner, in charge of the Public Works Department in Lord Curzon's régime. The proposal by Mr. Hope was on a more modest scale, on the

How much soever the Government in India may divest itself of the burden of direct construction, the operations of the railways in India are so inextricably bound up with the interests of the State, that the Government will have to continue to hold an important control over them. The reform above suggested will therefore be necessary even if the guaranteed companies are to be retained.

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basis of a contract for a quinquennial period, in the same manner as had been entered into with the provincial Governments. See the Minutes by T. C. Hope dated January 20, 1883, reproduced in the Appendix to the report of the Select Committee of 1884, and the extracts from the Minute dated October 16, by Colonel Gardiner, reproduced at p. 33, Acworth Committee Report, *op. cit.*

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